

POMONA,

OR AN

APPENDIX

CONCERNING

FRUIT-TREES,

In relation to

CIDER,

The *Making*, and several ways of *Ordering* it.

VIRG. Eclog. ix.

— *Carpent tua Poma nepotes.*



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To the Right Honourable

THOMAS

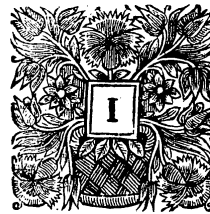
Earl of SOUTHAMPTON,

Lord HIGH TREASURER

O F

ENGLAND, &c.

My Lord,



If great *Examples* did not support it, the dignity and greatness of your *Person* would soon have given cheque to this presumption: But since *Emperours* and *Kings* have not only gratefully accepted *Works* of this nature, but honor'd them likewise with their own sacred hands, that *Name* of yours, (which ought indeed never to appear but on Instruments of *State* and fronts of *Marble*, consecrating your *Wisdom* and *Vertues* to *Eternity*) will be no way lessend by giving Patronage to these appendant *Rusticities*. It is from the Protection and Cherishment of such as your *Lordship* is, that these *Endeavours* of ours may hope one day to succeed and be prosperous. The noblest and most useful Structures have laid their Foundations in the *Earth*: if that prove firm *here* (and firm I pronounce it to be, if your *Lordship* favour it) We shall go on and flourish. I speak now in relation to the *Royal Society*, not my self, who am but a *Servant* of it only, and a *Pioner* in the *Works*. But be its fate what it will, Your *Lordship*, who is a *Builder*, and a lover of all *Magnificences*, cannot be displeas'd at these agreeable *Accellories*

The Epistle Dedicatory.

ories of *Planting*, and of *Gardning*. But, my Lord, I pretend by it yet some farther service to the *State* than that of meerly *profit*, if in contributing to your diversion I provide for the *Publick health*, which is so precious and necessary to it in your excellent *Person*. Vouchsafe *POMONA* your *Lordships* hand to kiss, and the humble *Presenter* of these *Papers* the honour of being esteem'd,

My Lord,

Your most humble, and most

obedient *Servant*

J. EVELYN.

POMONA

P O M O N A,

OR AN APPENDIX Concerning

FRUIT-TREES.

In relation to

C I D E R:

The Making, and several ways of Ordering it.

THE PREFACE.

S At Quercus was the Proverb; and it is now time to walk out of the Woods into the Fields a little, and to consider what Advancement may be there likewise made by the planting of FRUIT-TREES. For after the Earth is duly cultivated, and pregnant with a Crop of Grain; it is only by the Furniture of such Trees

bear Fruit, that it becomes capable of any farther Improvement. If then by discovering how this may best be effected I can but raise a worthy emulation in our Country-men; this addition of noble Ornament, as well as of Wealth and Pleasure, Food and Wine, may (I presume) obtain some grateful admittance amongst all Promoters of Industry.

But before I proceed, I must, and do ingeniously acknowledge, that I present my Reader here with very little of my own, save the pains of collecting and digesting a few dispers'd Notes (but such as are to me exceedingly precious) which I have receiv'd; some from worthy, and most experienc'd * Friends of mine; and others, from the well-serv'd Registers, and Cimelia of the ROYAL SOCIETY. Especially, those Aphorisms, and Treatises relating to the History of Cider, which by express commands they have been pleas'd to injoin I should publish with my Sylva.

It is little more than an Age, since Hops (rather a Medical, than Alimental Vegetable) transfus'd our wholesome Ale into Beer; which doubtless much alter'd our Constitutions: That one Ingredient (by some not unworthily suspected) preserving Drink indeed, and so by custom made agreeable; yet repaying the pleasure with tormenting Diseases, and a shorter life, may deservedly abate our fondness to it; especially, if with this be consider'd likewise, the casualties in planting it, as seldom succeeding more than once in three years; yet requiring constant charge and culture; Besides that it is none of the least devourers of young Timber.

And what if a like care, or indeed one quarter of it, were (for the future) converted to the propagation of Fruit-trees, in all parts of this Nation, as it is already in some, for the benefit of Cider? (one Shire

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alone within twenty miles compass, making no less, yearly, than Fifty thousand Hogheads) the commutation would (I persuade my self) rob us of no great Advantage; but present us with one of the most delicious and wholesom Beverages in the World.

It was by the plain Industry of one Harris (a Fruiterer to King Henry the Eighth) that the Fields, and Environs of about thirty Towns, in Kent only, were planted with Fruit, to the universal benefit, and general Improvement of that County to this day; as by the noble example of my Lord Scudamor, and of some other publick-spirited Gentlemen in those parts, all Herefordshire is become, in a manner, but one intire Orchard: And when his Majesty shall once be pleas'd, to command the Planting but of some Acres, for the best Cider-fruit, at every of his Royal Mansions, amongst other of his most laudable Magnificences; Noble-men, wealthy Purchasers, and Citizens will (doubtless) follow the Example, till the preference of Cider, wholesom, and more natural Drinks, do quite vanquish Hopps, and banish all other Droguess of that nature.

But this Improvement (say some) would be generally obstructed by the Tenant, and High-shoon-men, who are all for the present profit; their expectations seldom holding out above a year or two at most.

To this 'tis answer'd; That therefore should the Lord of the Mannour not only encourage the Work by his own Example, and by the Applause of such Tenants as can be courted to delight in these kinds of Improvements; but should also oblige them by Covenants to plant certain Proportions of them, and to preserve them being planted.

To fortifie this profitable Design, It were farther to be desir'd, that (if already there be not effectual provision for it, which wants only due execution and quickning) an Act of Parliament might be procur'd for the setting but of two or three Trees in every Acre of Land that shall hereafter be enclosed, under the Forfeiture of Six-pence per Tree, for some publick and charitable Work, to be levy'd on the Defaulters. To what an innumerable Multitude would this, in few years, insensibly mount; affording infinite proportions, and variety of Fruit throughout the Nation, which now takes a Potion for a refreshment, and drinks its very Bread-corn!

I have seen a Calculation of twenty Fruit-trees to every Five-pounds of yearly Rent; forty to Ten; sixty to Fifteen; eighty to Twenty; and so according to the proportion. Had all our Commons, and Waste-lands one Fruit-tree but at every hundred foot distance, planted, and fenc'd at the publick charge, for the benefit of the Poor, (whatever might dy and miscarry) enough would escape able to maintain a Stock, which would afford them a most incredible relief. And the Hedg-rows, and the Cham-pion-grounds, Land-divisions, Mounds, and Head-lands (where the Plough not coming, 'tis ever abandon'd to VVeeds and Briars) would add yet considerably to these Advantages, without detriment to any man.

As touching the Species, if much have been said to the preference of the Red-strake before other Cider-Apples, this is to be added; That as the best Vines, of richest liquor, and greatest burden, do not spend much in wood and unprofitable branches; so nor does this Tree: for though other Cider may seem more pleasant (since we decline to give Judgment of what is unknown to us) we yet attain our purpose, if This shall appear best

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best to reward the Planter, of any in present practise; especially, for the generality; because it will fit the most parts which are addicted to these Liquors, but miss of the right kinds, and prove the most secure from external injuries and Invaders.

But not to refine any farther upon the rare effects of Cider, which is above all the most eminent, soberly to exhilarate the Spirits of us Hypochondriacal Illanders, and by a specific quality to chase away that unsociable Spleen, without excess; we must not forget that the very Blossom of the Fruit perfumes, and purifies the Ambient Air, which (as Dr Beal well observes in his Herefordshire Orchards) is conceiv'd conduces so much to the constant Health and Longevity, for which that Country has been always celebrated, fencing their Habitations and sweet Recesses from Winds, and Winter-invasions, the heat of the Sun, and his unsufferable darts: And if (as he) we may acknowledge grateful trifles, for that they harbour a constant Aviary of sweet Singers, which are here retain'd without the charge of Italian wires: To which I cannot but add his following option, That if at any time we are in danger of being hindred from Trade in Foreign Countries, our English indignation may scorn to feed at their Tables, to drink of their Liquors, or otherwise to borrow or buy of them, or of any their Confederates, so long as our Native Soyl does supply us with such excellent Necessaries.

Hereford sh.
Orch. p. 8.

Nor do we produce these Instances to redeem the Liquor from the superstitition, prejudice, and opinions of those Men who so much magnifie the juice of the Grape above it: But we will here add some Experiments from undenyable success (in spite of Vintners, and Bauds to mens Palats) were they sufficient to convince us, and reclaim the vitiated; or that it were possible to dispute of the pleasantness, riches, and prae-dency of Drinks and Diets, and so to provide for fit, competent, and impartial Judges, when by Nature, Nation, or Climate (as well as by Custom and Education) we differ in those Extreams.

Most parts of Africa and Asia prefer Coffee before our Noblest Li-quors; India, the Roots and Plants before our best Cook'd Venison; Almost all the World crude water, before our Country Ale and Beers; and we English being generally more for insipid, luscious, or gross Diet, than for the spicy, poignant, oylie, and highly relish'd, (witness our universal hatred of Oyls, French-wine, or Rhenish without Sugar; our doating on Currans, Figgs, Plum-pottage, Pies, Pudding, Cake, &c.) renders yet the difficulty more arduous. But to make good the Experiment

About thirty years since one At. Taylor (a person well known in Herefordshire) challeng'd a London-Vintner (finding him in the Country) That he would produce a Cider which should excel his best Spanish or French-wine: The Wager being deposited, He brings in a good Red-strake to a private House: On that Scene, all the Vintner could call to be Judges pronounce against his Wine; Nor would any man there drink French-wine (without the help of Sugar) nor endure Sack for a full draught; and to those who were not accustomed to either, the more racy Canaries were no more agreeable than Malaga, too luscious for the repetition. But this Wager being lost, our Vintner renews his Chartel, upon these express terms, of Competent and Indifferent Arbitrators: The Gentle-

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man agrees to the Articles; and thus again after mutual engagements it must be debated who were Competent Judges, and absolutely Indifferent. Mr. Taylor proposes Three, whereof the odd Number should by Vote determine: They must be of the fittest Ages too, or rather the fittest of all Ages, and such as were inur'd neither to Cider nor any Wine; and so it was agreed. The Judges convene; viz. A Youth of ten years old, a Man of thirty, and a Third of sixty; and by All these also our Vintner lost the Battel. But this is not enough; 'Tis ask'd again by Nine Judges, the Ternary thrice over; and there 'tis lost also: To this we could add another, even of the Cider of Ledbury (which is not yet the best of Herefordshire) which, when an experienced London-Vintner had tasted, he wish'd had been Poyson; for that if it were known where he dwelt, it would utterly undo his Trade. And here I will conclude; for I think never was fairer Duel; nor can more be reasonably pretended to vindicate this Blessing of God, and our Native Liquor from their contempt, and to engage our Propagators of it.

Toti venificis
 placere cogi-
 tur, et mira-
 mur maxime
 esse Vinum?
 Plin.
 As 'tis most
 ingeniously
 cited by Dr
 Chasleton, in
 his excellent
 Discourse of
 the Abuse-
 rations of
 Wine, en-
 tered into the
 Register of
 the Royal
 Society; and
 (with those
 other most
 useful Pieces
 subjoin'd)
 worthy to
 be published,
 &c. See Re-
 gist Ro Soci-
 ety, Num. 2.
 17 Decemb.
 28 Jan. 1662.
 pag 57, 115.
 &c.

To sum up all: If Health be more precious than Opinion, I wish our Admirers of Wines, to the prejudice of Cider, behold but the Cheat themselves; the Sophistications, Transformations, Transmutations, Adulterations, Bastardizings, Brewings, Trickings, not to say, even Arsenical Compassings of this Sophisticated God they adore; and that they had as true an Inspection into those Arcana Lucifera, which the Priests of his Temples (our Vintners in their Taverns) do practise; and then let them drink freely that will: *'Agis deo & deo: ---- Give me good Cider.*

It is noted in our Aphorisms how much this Beverage was esteemed by His late Majesty, and Court, and there refer'd to all the Gentry of the adjoining Country, (no strangers to the best VVines) when for several Summers in the City of Hereford (so encompass'd with store of it, and brought thither without charge, or extraordinary subductions) it was sold for six-pence the VVine-Quart, not for the scarcity, but the excellency of it: And for the Red Strake, that it has been seen there hundreds of times (with vehement and engaged competition) compar'd with the Cider of other the most celebrated Fruit, when after a while of vapour, no man stood for any other Liquor in comparison.

But it is from these Instances (may some say) when the VVorld shall have multiplied Cider-Trees, that it will be time enough to give Instructions for the right Pressing and Preserving of the Liquor. The Objection is fair: But there are already more Persons better furnish'd with Fruit, than with Directions how to use it as they should; when in plentiful years so much Cider is impair'd by the ignorant handling, and becomes dead and sour, that many even surfeit with the Blessing; it being rarely seen in most Countries, that any remains good, to supply the defects of another year; and the Royal Society would prevent all this hazard by this free Anticipation. And yet when all this is said, we undertake not to divine what excellent Cider other soils may bear; nor do we positively extol the Red-Strake farther than the bounds and confines of Herefordshire, for the Experiments we have produc'd; but because there are doubtless many such soils sparsely throughout this Nation; why should it not incite our Industry to its utmost effort, and the

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the commendable emulation of endeavouring to raise a yet kindlier Cider-fruit if it be possible, and which may prove in it self as good, and as agreeable to the Soil where we plant it? And certainly, much of it is may fairly be expected, from the Trials, Culture, and Propagation of Kernel-Fruits of innumerable sorts, and from hopeful VVildings, and the peculiarity of Grounds.

It now remains, that I should make some Apology for my self, to ex-temperate the tumultuary Method of the ensuing Periods. Indied it was not intended for a quaint or elaborate piece of Art; nor is it the design of the Royal Society to accumulate Repetitions when they can be avoided; and therefore in an Argument so much beaten as is that of dressing the Seminary, Planting, and modes of Grafting, it has been with Industry avoided; such rude, and imperfect draughts being far better in their esteem (and according to my Lord Bacon's) than such as are adorn'd with more pomp, and ostentious circumstances, for a pretence to Perfection. The Time may come when the richness, and fullness of their Collections may worthily invite some more Industrious Person to accomplish that History of Agriculture, of which these Pieces (like the limbs of Hippolitus) are but scattered parts: And it is their greatest ambition for the Publique Good, to provide such Materials, as may serve to Raise, and Beautifie that most desirable Structure.

EVELYN.

POMONA

POMONA.

CHAP. I.

Of the Seminary.

WE had not the least intention to enlarge upon this *Title*, after we had well reflected on the many and accurate Directions which are already published, as well in our *French Gardiner*, as in sundry other *Treatises* of that nature, had not a most worthy *Member* of the *Royal Society* (to whom we have infinite Obligations) furnished us with some things very particular and remarkable, in order to the improvement of our *Seminaries*, *Stocks*, &c. which are indeed the very Basis and Foundation of *Cider-Orchards*. It is from those precious papers of his, and of some others (whose Observations also have richly contributed to this *Enterprise*) that we shall chiefly entertain our *Planter* in most of the following Periods.

Dr. Beale of
Yeovil in
Somerset-
shire.

Whoever expects from the *kernel* of a rich or peculiar *Apple* or *Pear* to raise *Fruit* of the same kind, is likely to find many obstructions and disappointments: For the *Wilding*, (*Crab* or *Pear*) *Pomus sylvestris*, being at the best the natural product of the soundest *kernel* in the firmest land, and therefore the gulf of the *Fruit* more strongly austere, fierce, and sharp, and also the *Fruit* less and more woody; and the pleasanter or plumper and larger *Apple* being the effect of some inteneration, which inclines to a kind of rebatement of the natural strength of the Tree; the best choice of *kernels* for *Stocks* indefinitely, (and on which we may graff what we please) should be from the soundest *Wilding*. For,

A *kernel* taken from any grafted-*Apple*, as *Pepin*, *Pear-main*, &c. does most naturally propend to the wildness of the *Stock* on which 'twas inserted, as being the natural mother of the *kernel*, which is the very heart of the *Apple*; and also from a more deep and secret Reason, to be hereafter unfolded.

Apples and *Pears* requiring rather a vulgar and ordinary *Field-hand*, than a rich *Garden-mould*, (as has been often seen to succeed by frequent Observations) it has been found that *kernels* sowed in a very high *compost*, and rank earth, have produced (*large* indeed) but insipid *Fruit*, hastily rotting on the Trees, before all the parts of it were mature. *Vid. Aphor. 33.*

And sometimes when they seemed in outward figure to bear the shape of grafted *Apples*, from whence the *kernels* came, yet the gulf did utterly deceive, wanting that vivacity and pungent agreeableness.

If the *kernels* of natural *Apples* (or of *ungrafted Trees*) should produce the same, or some other variety of *Apples*, (as sometimes it succeeds) yet would this care be seldom *opere pretium*, and at best but a work of *Chance*, the disappointment falling out so often through the sickleness of the *Soil*: Or admit that the most proper and constant, yet would the very *dews* and *rain*, by various and mutable Seasons, and even by the *Air* it self, (which operates beyond vulgar perception, in the very changes as well of the *mould*, as of the *seeds* and *fruit*) create almost infinite alterations: And the choice having been in all places (apparently for some *thousands* of years) by propagating the most delicate of *Fruits* by the *Grafts*, 'tis almost a desperate task to attempt the raising of the like, or better *Fruit* from the rudiments of the *Kernel*.

Yet since our design of relieving the want of *Wine*, by a *Succedaneum of Cider*, (as lately improv'd) is a kind of *Modern Invention*, We may encourage and commend their patience and diligence who endeavour to raise several kinds of *Wildings* for the trial of that excellent *Liquor*; especially since by late experience we have found, that *Wildings* are the more proper *Cider-Fruits*; some of them growing more speedily, bearing sooner, more constantly, and in greater abundance in leaner Land, much fuller of *juice*, and that more masculine, and of a more *Winy* vigour.

Thus the famous *Red-Strake* of *Hereford-shire* is a pure *Wilding*, and within the memory of some now living firnamed the *Scudamores Crab*, and then not much known save in the *Neighbourhood*, &c. Yet now it would be difficult to shew that *Red-Strake* which grew from a *kernel* in that whole *Tract*, all being since become *grafted* Trees. Thus 'tis also believed, That the *Bromsbury Crab* (which carries the same in some parts of *Glocester-shire*) and many of the *White Musts*, and *Green Musts*, are originally *Savages*; as now in *Somerfet-shire* they have a generous *Cider* made of promiscuous *kernels*, or *ungrafted Trees*, which fills their confidence that no other *Cider* does exceed it; and 'tis indeed strong, and of a generous vigour.

Nor dare we positively deny, but that even the best of our *Table-fruit* came also originally from the *kernel*: For it is truly noted by my *L. Bacon*, That the *Fruit* does generally obey the *Graft*, and yields very little to the *Stock*; yet some little it does.

The famous *Bezy de Hery*, an excellent *Musky Pear*, was brought into the best *Orchards* of *France* from a *Forest* in *Bretainy*, where it grew wild, and was but of late taken notice of.

But now to the deep Reason we lately threatened: We have by an Experiment found some near affinity between the *Kernel* of the *Apple* and the heart or interior of the *Stock*: For I saw (says *Dr. Beale*) an old rotten *Kernel-Tree* bearing a delicate *Summer-fruit*, yielding store of smooth *Cider*, ('tis call'd the *French-Kernel-Tree*, and is also a Dwarf, as is the *Red-Strake*;) and examining divers *Kernels*, many years successively, of that hollow and decayed *Tree*, I found them always very small of growth, and empty, meer skins of *Kernels*, not unlike to the emaculated *Scrotum* of an *Eunuch*; another

ther younger *Tree*, issuing from the sounder part of a *Root* of the same old *Tree*, had full and entire *Kernels*.

And from some such Observation might the production of *Berberies*, &c. without *Stones*, be happily attempted; an Instrument fitted to take out the marrow or pith of the *Branches*, (as the same *Dr. Beale* perform'd it;) for from the numerical Bulk of that *Fruit* he found some *Branches* produce *Berberies* that had no *stones*, others which had; and in searching for the cause of the effect, perceived, that the pith or heart was taken from the *radicat*, or main *Branches*, as the other was full of pith, and consequently the fruit in perfection; of all which (he writes me word) he made several trials on other fruit; but left the place before he could see the event. But he adds;

These many years (almost twenty) I have yearly tri'd Kernels in Beds of clean Earth, Pots, and Pans, and by the very leaves (as they appear'd in first springing for one month) I could discern how far my Essays had civiliz'd 'em: The Wilder had shorter, stiffer, brown, or fox-colour'd leaves, The more ingenuous had more tender, more spreading leaves; and approaching the lighter verdure of the Berberry leaf when it first appears. He adds,

Some *Apples* are call'd *Rose-Apples*, *Rosemary-Apples*, *Gilly-flower-Apples*, *Orange-Apples*, with several other adjuncts, denoting them, from what Reason I know not. But if we intended to try such infusions upon the *Kernels* (as should endeavour to alter their kinds) we should not approve of the bedabbling them with such infusions, (for over-moisture would rather enervate than strengthen them) but rather prepare the *Earth* the year before, with such infusions, and then hinder it from producing any *Weeds*, till ready for the *Kernels*, and then in dewy times, and more frequently when our *Climate* were surcharg'd with *rain*, cover the *Beds* and *Pots* with the small leaves of *Rosemary*, *Gillyflowers*, or other odoriferous *Blossoms*, and repeat it often, to the end the *dews* may meteorize, and emit their finer spirits, &c. Or if any shall please to be so liberal of their *Salts* and *Calcinations* of peculiar *Virtues* (though possibly the *Essay* may indanger their seeds) yet the mixture of such *Salts* finely reduc'd and strewed discreetly on their *Beds*, may be a more probable means, than those *Liquid Infusions* which have hitherto been so confidently boasted. For thus also we are in this *Age* of ours provided of more vigorous *Ingredients* for trials than were known to the *Ancients*. Finally,

From what has been deduc'd from the *Wilding* of several parts, it may manifestly appear, how much more congenial some soil is than other, to yield the best *Cider-fruit* from the *Kernel*; and the hazzle ground, or quicker mould, much better than the more obstinate clay or ranker earth: In hot *Gravelly-Grounds*, where almost no sort of *Fruit* will grow, *Pears* will thrive; and a Friend of mine assures me, of One that clave a *Rock*, and filling it with a little good *Earth*, planted a *Pear-tree* therein, which prosper'd exceedingly: I add this, that none may go hence without encouragement.

CHAP. II.

Of Stocks.

THE former thus establish'd, after all *humours* and *varieties* have been sufficiently wearied, we shall find the *Wilding* to be the hardiest and most proper *Stock* for the most delicate *Fruit*: This confirm'd by *Varro*, lib. 1. cap. 40. *In quamcumq; arborem inferas*, &c. and 'tis with reason: However they do in *Herefordshire*, both in practice, and opinion, limit this Rule; and to preserve the gust of any delicate *Apple* (as of the *Pear-main*, *Quince-Apple*, *Stockin*, &c.) rather graft upon a *Gennet-Moyle* or *Cyddadin-Stock*, (as there call'd) than a *Crab-Stock*; but then indeed they conclude the Tree lasts not so long; and 'tis observ'd, That *Apples* are better tasted from a clean, light land, &c. than from stiffer clay, or the more pinguid and luxurious soil, whence we may expect some assistance from the civility of the *Stock*, which is a kind of prepared *Soil*, or foundation to the *Graff*; even as our very *Transplantations* into better ground is likewise a kind of *Grafting*.

Thus in like manner our Master *Varro*, *loci citato* concerning *Pears*; *Si in Pyrum Sylvaticum*, &c. The *Wild-stock* does enliven the dull and phlegmatic *Apple*, and the Stock of a *Gennet-Moyle* sweeten and improve an *Apple* that seems *over-tart*, as the *Pome-roy*, or some *Greening*, &c. or may rather seem to abate at least some *Apple* over-tart and severe.

Your *Crab-stock* would be planted about *October*, at thirty two Foot distance, and not grafted till the third *Spring* after, or at least not before the *second*.

But if your design be for *Orchard* only, and where they are to abide, an *interval* of sixteen Foot shall suffice for the *Dwarfish* kind, or in the Grounds where the *Red strake*, or other *Fruit-trees* are of small bulk, provided the ground be yearly turn'd up with the *spade*, and the distance quadrupled where the *Plough* has privilege; this being the most expedite for such as have no *Nursery* ground.

CHAP.

CHAP. III.

Of Graffs and Infections.

MAKE choice of your *Graffs* from a constant and well-bearing Branch.

And as the *Stock* hath a more verdant rind, and is capable to yield more plenty of *juice*, so let the *Graff* have more *Eyes* or *Buds*: Ordinarily three or four *Eyes* are sufficient to give issue to the *Sap*; but as well in *Apples*, and *Pears*, as in *Vines*, those *Graffs* or *Cions* are prefer'd in which the *buds* are not too far asunder, or distant from the foot thereof: and such a number of *buds* usually determining the length of the *Graff*, there may divers *Cions* be made of one *Branch*, where you cannot procure plenty of them for severals.

As to the success of *grafting* the main point is, to joyn the inward rind of the *Cion* to the inward rind of the *Stock*, so that the *Sap* of the *One*, may there meet with the *Sap* of the *Other*, and these parts should be joyn'd closely, but not too forceably; that being the best and most infallible way, by which most of the quick and juicy parts are mutually united, especially towards the bottom.

If the *Stock* be so big as to endanger the pinching of your *Graff*, when the *wedge* is drawn out of the *cleft*, let the inner side of the *Graff*, which is within the word of the *Stock*, be left the thicker, that so the *woody* part of the *Cion* may bear the stress, and the *sappy* part be preserv'd from bruising. Some by an happy-hand, do with good success *Graff* without cleaving the *Stock* at all, only by *Incisions* in the *Rind*, as the *Industrious* Mr. *Austin* teaches us: But since this is not for every *Rustic* hand, nor seems to fortifie so strongly against imperious *Winds*, before the Union be *secure*, there had need be some extraordinary *defence*.

Choose the straightest and smoothest part of the *Stock* for the place where you intend to *graft*: If the *Stock* be all knotty (which some esteem no impediment) or crooked, rectifie it with the fittest posture of the *Graff*.

For a *Graff* cover not a *Cions* too slender; for the *Sun* and *Wind* will sooner enforce it to wither: Yet are we to distinguish, that for *Inoculation*, we take the *Bud* from a sprig of the last years shoot; and most allow that the *Cions* should also have some of the former with it, that it may be the stronger to *graft*, and abide to be put close into the *Stock*, which is thought to advance it in bearing.

In *Herefordshire* they do frequently choose a *Graff* of several years growth; and for the *grafting* of such large *Stocks* as are taken out of the *Woods* or *Nurseries*, and fitted into rows for *Orchards*, they choose not the *Graffs* so small as in other Countries they require

quire them; which has, it seems, occasion'd some complaint from them that understand not the Reason of the first branch of this Note. Once for all, the stumpy *Graff* will be found much superior to the slender one, and make a much nobler and larger Shoot. This upon experience.

Graff your *Cions* on that side of the *Stock* where it may receive the least hurt from the *South-west* Wind, it being the most common, and most violent that blows in *Summer*; so as the *wind* may blow it to the *Stock*, not from it: And when the *Zephyres* of the *Spring* are stirring, choose that *Season* before all others for this work.

Some there are who talk of removing the *Stock* about *Christmas*, and then also *graft* it; which there be that glory they can successfully do even by the fire side, and so not be forc'd to expect a two or three years rooting of the *Stock*; But in this *Adventure* 'tis advisable to plunge the *Graff* three or four inches deep in the *Stock*. Lastly,

Be careful that the *Rain* get not into the *clefts* of your young grafted *Stocks*: Yet it has been noted, That many old *Trees* (quite decay'd with an inward hollowness) have born as full burdens, and constantly, as the very soundest, and the *Fruit* found to be more delicate than usually the same kind from a perfect and more entire *Stock*.

Except some former case requires it, leave not your *Graffs* above four, five, or (at most) six inches of length above the *Stock*; for by the length it draws more feebly, and is more expos'd to the shocks of the *Wind*, or hurt by the *Birds*; and you shall frequently perceive the summities and tops of such young *Graffs* to be mortified and die.

The *Genet-moyle* is commonly propagated by cutting off the *Branch* a little below a *Burr-knot*, and setting it without any more Ceremony; but if they be also grafted first as they grow on the *Tree*, and when they have covered the head, cut off below the *Burr*, and set, it is far better: In this separation cut a little beneath the *Burr*, and peel off, or prick the *Bark*, almost to the *knot*: Thus also if the *Branch* have more *knots* than one, you may *graft*, and cut off yearly, till within half a foot of the very *stem*, which you may *graft* likewise, and so let stand.

Now for encouragement in transporting *Graffs* at great distance, we find that with little care (their tops uncut and unbruised) they will hold good, and may support the transportation by *Sea* or *Land* from *October* or *November* to the very end of *March*: See *Sir H. Plat's Offers*, Paragr. 75. To which may be added, That if the *Graff* receives no hurt by lying in the *Stock* expos'd to all rain, dews, and severities of *Winter* frosts from *December* to *Spring*, (as has been experimentally noted); then (by a stronger presumption) in oyled, or rather waxen Leather, it may undoubtedly escape. Some prescribe, That the *ends* shall be stuck in a *Turnip*: and many excellent *Graffers* (*Gentlemen* some of very good credit) have assured us, That the *Graffs* which seemed withered, and fit

to

to be cast away, have proved the best when tri'd. Thus in honest *Barnaby Googes* noble *Heresbachius* you will find it commended to gather your *Cions* in the wane of the *Moon*, at least ten days before you *graft* them; and *Constantine* gives this reason for it, That the *Graff* a little withered, and thirsty, may be the better received of the *Stock*: I know some who keep them in *Earth*, from the end of *October*, till the *Spring*, and will hardly use them before. There are also other inducements for this practice, as *Simon Harwood*, pag. 4. has shew'd us; but none beyond our own experience, who have known *Graffs* gathered in *December* thrive and do perfectly well.

The best expedient to convey *Graffs* is to stick the *cut-ends* in *Clay*, envelop'd with a *clout* to preserve it from falling off; and to wrap the other part of the *Twigs* in dry *Hay* or *straw-bands*, which will secure them both from the *Winds*, *Galling*, and other injuries in Transportation: Nay, I have known them sent many *hundred Miles* from beyond the *Sea* accommodated to an ordinary Letter, and though somewhat short, and with very few *Buds*, yet with excellent success; and if this course were more universally consider'd, we might be furnish'd with many great *Curiosities* with little difficulty or charge.

CHAP. IV.

Of Variety and Improvements.

IF any man would have variety of unexpected and unknown *Apples* and *Pears*, for the improvement of *Cider*, or *Palate-fruit*, there is more hope from *Kernels* rais'd in the *Nursery* (as has already been directed) than from such trials of *graftings* as we have yet seen in present use.

But if we would recover the patience, and the sedulity of the *Antient* (of which some brief account will follow) or listen to some unusual Proposals, then may we undertake for some variety by *Institutions*.

To delude none with Promises, we do much rather recommend the diligence of enquiring from all *Countries* the best *Graffs* of such *Fruits* as are already found excellent for the purpose we design: As from the *Turgovians* for that *Pear* of which *Dr. Pell* gives so good and weighty informations; and of which I had presented me some *Graffs*, together with a taste of the most superlative *Perry* the *World* certainly produces; both which were brought near 800 Miles, without suffering the least diminution of Excellency, by my Worthy Friend Mr. *Hake* a Member of the *R. Society*, in the year 1666, and tasting as high, and as rich as ever to the present year I am writing this Paragraph.

But as some sorts are to be enquired after for the *Palate* and the *Table*,

Table, so 'tis now our main business to search after such as are excellent for their *Liquor*, either as more pleasant, more *winy*, or more lasting; of which sort the *Bosbury* bare-land-Pear excels. The *Red Strake*, *Brombury-Crab*, and that other much celebrated *Wilding* call'd the *Oaken-pin*, as the best for *Cider*; though for sufficient reasons we do yet prefer the *Red-Strake*, to oblige the emulation of other Countries, 'till they find out a *Fruit* which shall excell it, and which we do most heartily wish.

But to pursue the diligence of the *Ancients*, we direct the eye to a general expedient for all kinde of varieties imaginable, and which we hold far better than to present the World with a *List* of the particulars either known, or experimented: For who indeed but a *Fool* will dare to tell *Wonders* in this severe Age, and upon an *Argument* which is so environ'd with *Imposture* in most *Writers* old or new? Much less pretend to *Experiments* which may fail to succeed by default of an unhappy occasion, when the conclusion must be *Penes Authorem sit fides!*

And truly men receive no small discouragement from the ugly affronts of *Clowns*, and less cultivated persons, who laugh and scorn at every thing which is above their understanding: For example; I knew a man (writes Dr. Beale to me) and he a most diligent Planter and Grafter, who for thirty or forty years made innumerable Effays to produce some change of an Apple by *Grafting*: It seems he was ambitious to leave his Name on such a Fruit, if he could have obtained it; but always fail'd; for he perpetually made his Trials upon Crab-stocks, or such (at least) as did not greatly differ from the kind; and he ever found that the *Graft* would preëminate. And how infinitely such Men having lost their own aims, will despite better Advice, we leave to observation.

However, let us add, That where nothing is more facile than to raise new kinds of Apples (in infinitum) from *Kernels*: Yet in that *Apple-Country* (so much addicted to *Orchards*) we could never encounter more than two or three persons that did believe it: But in other places we meet with many that, on the other side, repute *Wildings*, or (as they call them) *Kernel-fruit*, at all adventure, and without choice, to be the very best of *Cider-fruit*, and to make the most noble *Liquor*. So much does the common judgment differ in several Countries, though at no considerable distance, even in matters of visible Fact, and epidemical experience.

It has been soderly affirmed, that by *grafting* any *White Apple* upon an *Elm*, it changes the *Apple*, and particularly to a red colour: I have a Direction where we may be eye-witnesses of the proof; whatever the Truth of it be, we are not over-hastily to erect *Hercules's Pillars*; but rather to encourage the Experiment.

To gratifie yet the *Ingenious*, instruct others, and emancipate us all from these *bastinado Clowns*, we are furnish'd with many Arguments and proofs to allure a good success, at least for variety and change, if not for infinite choice: Two or three antient References being duly præsented; namely, First,

1. That

Or, An Appendix concerning Fruit-Trees, &c.

1. That 'tis in vain to expect change of Apples from *Grafting* upon differing Stocks of Crabs or Apples.

2. In vain also are we to look for a kind Tree from a very much differing Stock; as an altered Pear to grow kindly on a Crab or Apple-stock, &c. contra. There go about indeed some jugglings, but we disdain to name them.

It is one thing to find the kindest Stock for the Improvement of any Fruit; as the Crab-stock for the delicate Apple, the Wild or Black-Cherry-Stock, for the graft of the fairest Cherries; the largest Vine, (whose root makes belt shift for relief) to accept the Graft of the more delicate Vine; the White Pear-Plum Stock, for the *Abri-cot*, &c. And another thing it is to seek the Stock which begets the wonder, variety, and that same transcendent and particular excellency we inquire after: For this must be at more remote distance; and we offer from the *Ancients* to shew, how it may be at any distance whatsoever: But the whole expedient seems to be hinted by Sir H. Plat. pag. 72. where he affirms, that If two Trees grow together, that be apt to be grafted one into another, then let one branch into another, workmanly joining Sap to Sap. This our Gardeners call *Grafting by Approach*, and is explicated at large by *Columella*.

But in this express Rule he is too narrow for our purpose, and far short of old experience; as we find in *Parag. 63.* where he affirms, We may not graft a contrary Fruit thereon. Against this we urge; That any contrary Fruit may be adventured, and any Fruit upon any fruitless Stock growing in propinquity in the same Nursery; as it is not only affirm'd, but seriously undertaken, and experimentally proved by the sober *Columella*, in several of his Treatises; Turn to the eleventh Chapter of his fifth Book, (*Stephens Edition*): Sed cum antiqui negaverint posse omne genus surculorum in omnem Arborem inferi, & illam quasi finitionem, qua nos paulò ante usi sumus, veluti quandam legem sanxerint, eos tantùm surculos posse coalescere, qui sint cortice, ac libro, & fructu consimiles iis arboribus quibus inseruntur, existimavimus errorem hujus opinionis discentiendum, tradendamque posteris rationem, qua possit omne genus surculi omni generi Arboris inferi. And the example follows in a Graft of an Olive into a Fig-stock by *Approach* (as we call it,) which he also repeats in the twenty seventh Chapter of his Book De Arboribus, without altering a syllable. But possibly in this check at the *Ancient* he might aim at old *Varro*, whom we find threatening no less than *Thunderbolts* and *Blasts* to those who should attempt these strange *Marriages*, and did not fort the Graft with the Tree; consult lib. 1. cap. 40. And yet you may see this Art assum'd by *Columella* for his own invention (1500 years since) to be no news to *Varro* 200 years older; where he goes on, Est altera species ex arbore in arborem inserendi nuper animadversa in arboribus propinquis, &c. Though here again we may question our Masters nuper animadversa too; since before he was born *Cato* relates it as usual to Graft Vines in the manner by them prescribed, cap. 41. Tertia instito est: Terebra vitem quam inseres, &c. Which by the way makes us admire how the witty *Walchius* in his Discourse De vitibus

vitis fructuaria, pag. 265. could recount the *grafting* of *Vines* amongst the wonders of *Modern Inventions*:

But it seems *Varro* and his *Contemporaries* did extend the practice beyond *Cato*; and *Columella* proceeded further than *Varro*, even to all sorts of Trees, however differing in nature, quality, bark, or season: And then *Palladius* assumes the result, and gives us the particulars of the success in his *Poem, De Institutionibus*. And to these four as in chief (no phantastical or counterfeit persons) we refer the Industrious:

But be pleas'd to take this note also: As soon as your *Graff* hath attained to a *second*, or at farthest a *third* years growth, take it off the *Stock*, and then graft it upon a *Stock* of a more natural kind: For in our own *Trials* we have found a *graft* prosper the second year exceeding well; yet the third the whole growth at once blasted quite to the very *Stock*, as if *Varro's* Augurs had said the word.

To this add, the making use of such *Stocks* as in this *Experiment* may contribute some special aid to several kinds of humane *Infirmities*: As suppose the *Birch* Tree for the *Stone*, the *Elm* for *Fevers*, &c. For 'tis evident, that by such *Institutions*, the *Branch* may convert the *Sap* of the *Root* even of another *Species* into its own nature, and alter all its *properties*; though in some they *dominate*, as the *Branch* of the *Apple* in the *Rhamnus*, or *Mezereau*, acquires a *Purgative* quality. And by these means why may not the *Fruit* by effectual *Marriages* be rendred *Cordial*, *Astringent*, *Purgative*, *Sudorific*, *Soporiferous*, and even *Deliterious* and *Mortal*: But this we only hint.

Moreover, To graft rather the *Wilding*, or *Crab*, than the *Pepin*, because the *Wilding* is the more natural; and *Nature* does more delight in *progress*, than to be *Retrograde* and go backwards.

I should also expect far more advance from a more *pungent sap*, than from *Inspid*; as generally we see the best and vigorous *juices* to salute our *Palats* with a more agreeable *piquancy* and tartness; for so we find the relish of the *Stocking-Apple*, *Golden Pepin*, *Pearmain*, *Eliot*, *Harvy*, and all (both *Russetings* and *Greenings*) to be more poignant than of others.

And here we note from *Palladius*, That the *Ancients* had the success which we all, and particularly Sir H. *Plat*, does so frequently deny, as in the particular of *grafting* the *Apple* on the *Pear*, & *contra*. Let us hear him *de Pomo*.

The Grafted-Crab its bushy Head does rear,
Much Meliorating the inferted Pear:
Its self to leave its Wildness does invite,
And in a Nobler issue to delight.

*Infusa proceris pergit concrefcere ramis,
Et sociam mutat malus amica Pyrum:*

Séque

*Séque ferosylvos hortatur linquere mores,
Et partu gaudet nobiliore frui.*

Pallad. de Institutionib. lib. 14.

But possibly *Palladius* assum'd this *Poetical* expression, upon presumption, that no man in his days durst degrade the most excellent *Quince* to support the *Cyon* of another *Fruit*, which then must be of less esteem, but we by our *luxury* have found the success.

And we have good argument to believe; That *Virgil*, and *Columella*, in several of their wonderful Relations of these kinds of mixture, (which but for the prolixity we might now recite) did not so far affect *Wonders* as to desert the truth.

You may also observe, That as well the *French Gardiner*, and our *Modern Planters*, have found the same benefit from the *Stock* of the *Quince*, as old *Palladius* did, it seems, acknowledge; yet (as he conceiv'd) more hospitable still with its own *kindred*, and that

Though the *Quince-stock* admit all other *Fruit*,
Its *Cyon* with no other *stock* will suit:
Scorning the Bark of Foreign Trees, does know
Such lovely *Fruit* on no mean *stem* can grow:
But the *Quince-Graff*, to the *Quince-stock* is joy'n'd,
Contented only to improve its kind.

*Cum præstat cunctis se servata cydonia pomis,
Alterius nullo creditur hospitio.
Roboris externi librum aspernata superbit,
Scit tantum nullo crescere posse decus:
Sed propriis pandens cognata cubilia ramis,
Stat, contenta suum nobilitare bonum.*
Pallad. de Malo Cydonio.

Lastly, We did by unexpected chance find the facility of *grafting* the very youngest *Stocks*, even of one years growth, by the *Root*: At a second removal of the *Stocks* (being then of two years growth) we observed some *Roots* so fast closed together into one, as not to be divorced: Hereupon we concluded, If casualty, or negligence, chance of spade, or oppression of neighbourhood did this, by *Art* it might be done more effectually, and possibly to some desirable purpose; for that then the *stock* was more apt to receive a mastering *Impression*; and any *Garden Plant* whatsoever might by this *process* interchange and mingle their *Roots*. But this can extend no farther than the *stock* may prevail with the *Graff*.

And thus we have presented our diligent *Ciderist* with what Observations and Arguments of Encouragement, grounded on frequent Experience, we have received from our most ingenious Correspondents, especially the Learned and truly Candid D^r Beale, in whose Person we have so long entertain'd you: and to these we could add sundry others, were it not now time (whiles we discourse

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of

of possibilities) to conclude with something certain, and to speak of what we have.

For the kinds then of *Cider-Apples* in being; *Glocestershire* affects the *Bromsbury Crab*; It affords a smart, winy *Liquor*, and is peculiarly hardy, but not so proper for a cold and late-bearing *Climate*, it being not ripe in *hot Land* till the end of *Autumn*, nor fit to be ground for *Cider* till *Christmas*, lying so long in heaps and preparation.

It is in the same *Shire* that they likewise much esteem of the *white and red Must-Apple*, the sweetest as well as fowrest *Pepin*, and the *Harvey-Apple*, which (being boyld) some prefer to the very best of all *Ciders*; though from any experience we have yet seen, we cannot recommend it, and it will want more particular and infallible *Directions* before we can be reconciled to the *Adventure*, which we have observed so frequently to miscarry.

But about *London*, and the more Southern *Tracts*, the *Pepin*, and especially the *Golden*, is esteemed for the making of the most delicious of that *Liquor*, most wholesom, and most restorative; and indeed it may (in my poor judgment) challenge those *perfections* with very good reason.

By others the *Pearmain* alone is thought to come in competition with the best; but, say they, the *Cider* is for the most part found of the weakest, unless encourag'd with some agreeable *Pepin* to inspirit it; whereas *this* is to be taken according to the constitution of the *Fruit*; for even *Pepins* do differ as much from *Pepins* in Taste and *Liquor*, as the *Kind*, and the *Soil* dispose them; nay, though of the same *species*; so as the *Cider* of the *Pearmain* (though likewise very different) does not seldom exceed it in that briskness which others attribute to the *Pepin*, which is for the most part more smooth and less poignant: I conceive a good way of extracting the *Spirits* of these *Fruits*, might prove a likely *Criterion* to ground our judgments on in all these niceties; whilst by the way, we may note, that of all *Apples*, that bear one general Name, the *Pepin* seems the most to differ; and the *Cider* from the genuine *Cider-Fruit*, keeps nearest to the same strength and relish.

Some commend the *Fox-Whelp*; and the *Gennet-Moyle* was once prefer'd to the very *Red-sirake*, and before the *Bromsbury-Crab*; but upon more mature consideration, the very *Criticks* themselves now *Recant*, as being too effeminate and soft for a judicious *Palate*.

The *Red-sirake* then amongst these accurate *Tasters* hath obtained the absolute preeminence of all other *Cider-fruits*, especially in *Herefordshire*, as being the richest and most *vinous* *Liquor*, and now with the more earnestness commended to our practice, for its celerity in becoming an *Orchard*, being ordinarily as full of *Fruit* at ten years growth as other *Trees* are at twenty; the *Pepin* or *Pearmain* at thirty: And lastly, from that no contemptible quality, That though the smiles of it intice even on the *Tree*, as being indeed better than most other *Table-fruits* whilst hanging, yet it needs

needs no *Priapus* for Protector, since (as beautiful as 'tis) it has no such temptation to the *Tast*, 'till it be either *baked*, or converted into *Cider*. The same may be affirmed also of the *Bromsbury-Crab*, *Bareland-Pear*, and many other *Wildings*, who are no less at their *Self-defence*; yet the *Gennet-Moyle* at due maturity, has both a gentle, and agreeable relish; their unagreeableness to the *Palate* (as else-where noted) proceeding only from the separation the juice makes from the *Pulp*, which even *Children* do remedy by *contusing* them on their sharpened Elbows; which (if thoroughly weigh'd) seems to dispute, if not overthrow some *Hypotheses* of *Fermentation*.

In sum, The *Red-sirake* will at three years *grafting* give you fair hopes, and last almost an hundred years; if from sundry mens *Experience* of more than 60 years, we may divine, and that it agree with the *Soyl*. And the *Gennet-Moyles* hasten to an Orchard for *Cider* without trouble of *Art* or *Grafting*: But note, That this *Tree* is very apt to contract a *bur-knot* near its Trunk, where it begins to divide; and being cut off under that *boss*, commonly grows (if so set) and becomes speedily a *Tree*, except it encounter an extraordinary dry *Summer* the first year to give it check. And though the knack of *grafting* be so obvious, yet this more appearing facility does so please the lazy *Clowns*, that in some places they neither have nor desire any other *Orchards*; and how this humour prevails you may perceive by the hasty progress of our *Kentish Codlin* in most parts of *England*. But this hasty growth and maturity of the *Tree* is by another *Instance* confirm'd to us from that worthy *Gent*. Mr. Blount of *Orleston*, who writes me word, that some of the rejected *Spray*, or *Prunings* of the *Gennet-Moyle*, taken by chance to *rice* a Plot of *Pease* (though stuck into the Earth but at *April*) put forth root, grew, blossom'd, and bore *Apples* the same year.

But to advance again our *Red-sirake*, even above the *Pepin*, and the rest (besides the celerity of the improvement and constant burthen) consider we the most incredible product, since we may expect from each *Apple* more than double the quantity; so as in the same *Orchard*, under the same *culture*, thirty *Red-sirake* *Trees* shall at ten years *grafting* yield more *Cider* than a hundred of those *Pepins*, and surmount them in proportion during their period at least sixty or seventy years: So that granting the *Cider* of the *Golden-Pepin* should excel, (which with some is precarious) yet 'tis in no wise proper for a *Cider-Orchard*, according to our general design, not by half so soon bearing, nor so constantly, nor in that quantity, norfulness or security.

Concerning *Perry*, the *Horse-Pear* and *Bare-land-Pear* are reputed of the best, as bearing almost their weight of spritful and *vinous* *Liquor*. The Experienced prefer the *tawny* or *ruddy* sort, as the colour of all other most proper for *Perry*: They will grow in common-fields, gravelly, wild, and stony ground, to that largeness as one only *Tree* has been usually known to make three or four *Hogsheads*: That of *Bosbury*, and some others, are so tart and

harsh that there is nothing more safe from plunder, when even a *Swine* will not take them in his mouth. But thus likewise would the abundance preserve these Fruits, as we see it does in *Nor-mandy*.

CHAP. V.

Of the Place and Order.

WE do seriously prefer a very wild Orchard, as mainly intended for the publick utility, and to our purpose of obliging the People, as with a speedy *Plantation* yielding store for *Cider*: Upon this it is that we do so frequently inculcate, how well they thrive upon *Arable*, whilst the continuing it so accelerates the growth in almost half the time: And if the *Arable* can be so level'd (as commonly we see it for *Barly*-land) then without detriment it may assume the Ornament of *Cyprus*, and flourish in the *Quincunx*.

If it be *shallow* Land, or must be rais'd with high *Ridges*, then 'tis necessary to have more regard of planting on the *tops* of those eminencies, and to excuse the unavoidable breach of the *decussis*, as my Lord *Verulam* excuseth the defect of our humane *phanties* in the *Constellations*, which obey the *Omnipotent* order rather than ours: Add to this the rigour of the *Royal Society*, which approves more of *plainness* and *usefulness*, than of *niceness* and *curiosity*; whilst many putting themselves to the vast charge of levelling their grounds, oftentimes make them but the worse; since where the places are full of gasty inequalities, there may be planted some sorts of *Cider fruit*, which is apt by the great burden to be press'd down to the ground, and there (whiles it hides *Irregularities*) to bear much better, and abundantly beyond belief; for so have been seen many such recumbent *Pear-trees* bear each of them *two, three, yea, even to six* or more *Hogheads* yearly.

And for this *Cider*, whiles we prefer some sorts of *Wildings* which do not tempt the *palate* of a *Thief*, by the caution we shall not provoke any man to repent his charge from the necessity of richer and more reserv'd *Enclosures*; Though we have frequently seen divers *Orchards* successfully planted on very poor *Arable*, and even in stony *Gleab, gravel and clay*, and that pretty high, on the sides and declivities of *Hills*, where it only bears very short grass, like to the most ordinary *Common*, not worth the charge of *Tillage*: And yet even there the *Tenants* and *Confiners* sometimes enclose it for the *Fruit*, and find their reward, though not equally to such *Orchards* as are planted on better ground, and in the *Vallies*. Hence we suggest, That if there be no *Statute* for it, 'twere to be wished there were a *Law* which should allow *endeavours* of this nature out of the *Common-field*, to enclose for these *Encouragements*,
since

Or, *An Appendix concerning Fruit-Trees, &c.*

since both the *Publick* and the *Poor* (whatever the clamour is) are advantaged by such *Enclosures*, as *Tusser* in his old Rhimes, and all indifferent observers apprehend with good reason.

True indeed it is, That all Land is not fit for *Orcharding*, so as even where to form just *Enclosures* being either too *shallow and dry*, or too *wet and sterving*: But this (saith the judicious Mr *Buckland*) we may aver, That there are few *Parishes, or Hamlets* in England where there are not some *fat and deep Headlands* capable of Rows of Trees; and that (as hath been said) the raised Banks of all *Enclosures* generally by the advantage of the depth, *fatness, and health* of their Mould, yield ready opportunity for planting; (yea, and in many Countries multitudes of *Crab-stocks* fit to be grafted;) in which latter (saith he) I have frequently observed very goodly *Fruit-bearing Trees*, when in the same soil Trees in *Orchards* have been poor and worth nothing.

To conclude,

If the soil be very bad and unkind, any other *Fruit* (which it may more freely yield without requiring much depth, and less *sun*) may be planted instead of *Apples*.

CHAP. VI.

Of Transplanting, and Distance.

THe most proper season for *Transplanting* is before the hard frosts of *Winter* surprize you, and that is a competent while before *Christmas*: And the main point is, to see that the *Roots* be larger than the *Head*; and the more ways that extends, the better and firmer.

If the *Stock* seems able to stand on its own three or four legs (as we may call 'em,) and then after settlement some stones be heaped or laid about it, as it were gently wedging it fast, and safe from Winds (which stones may after the second or third year be removed) it will save from the main danger: For if the *Roots* be much shaken the first *Spring*, it will hardly recover it.

You may transplant a *Fruit-Tree* almost at any tolerable season of the Year, especially if you apprehend it may be spent before you have finish'd your work, having many to remove: Thus, let your *Trees* be taken up about *Allhallontide*, (or as soon as the leaf begins to fall); then having trimm'd and quickned the *Roots*, set them in a *Pit*, forty, fifty, or a hundred together, yet so as they may be covered with mould, and kept very fresh: By the *Spring* they will be found well cured of their wounds, and so ready to strike root and put forth, that being *Transplanted* where they are to stand, they will take suddenly, and seldom fail; whereas being thus cut at *Spring* they recover with greater hazard.

The very *Roots* of *Trees* planted in the ground, and buried within a quarter of an Inch, or little more, of the level of the *Bed*, will sprout, and grow to be very good *Stocks*. This and the other

other being Experiments of our own, we thought convenient to mention.

By the oft removal of a *Wild-stock*, cutting the ends of the *Roots*, and dis-branching somewhat of the *Head* at every change of place, it will greatly abate of its natural wildness, and in time bring forth more *civil* and *ingenuous* Fruit: Thus *Gillyflowers* do (by oft removals, and at full-Moon especially) increate and multiply the leaves.

Plant not too deep; for the *over-turf* is always richer than the *next* Mould. How material it is to keep the *coast* or side of the *stock*, as well in *Fruit-trees* as in *Forest*, we have sufficiently discuss'd; nor is the *Negative* to be prov'd.

See *Aph. 35.* For the *distance* in *Fields*, they may be set from *thirty two* to *sixty* Foot, so as not to hinder the *Plough*, nor the benefit of manure and soil; but in *hedg-rows* as much nearer as you please, *Sun* and *Air* considered.

CHAP. VII.

Of the Fencing.

Seeing a *Cider-Orchard* is but a wild Plantation, best in *Arable* well enclos'd from *Beasts*, and yet better on the *Tops*, *Ridges*, and natural *Inequalities*, (though with some loss of Order, as we shew'd,) one of the greatest discouragements is the preserving of our *Trees* being plant'd, the raising of them so familiar.

We have in our *sylva* treated in particular of this, as of one of the most material obstacles; wherein yet we did purposely omit one *Expedient*, which came then to our hands from the very Industrious Mr. *Buckland* to the Learned Dr. *Beal*: You shall have it in his own words.

This of Fencing single *Trees* useth to be done by *Rails* at great charges; or by *Hedges* and *Bushes*, which every other year must be renew'd, and the materials not to be had in all places neither. I therefore prefer and commend to you the ensuing form of Planting and Fencing, which is more cheap and easie, and which hath other Advantages in it, and not commonly known. I never saw it but once, and that imperfectly perform'd; but have practis'd it my self with success: Take it thus.

Set your Tree on the *Green-swarth*, or five or six inches under it if the soil be very healthy; if moist or weeping, half a foot above it; then cut a Trench round that Tree, two foot or more in the cleare from it: Lay a rank of the Turfs, with the grass outward, upon the inner side of the Trench towards your Plant, and then a second rank upon the former, and so a third, and fourth, all orderly plac'd, (as in a Fortification) and leaning towards the Tree, after the form of a *Pyramide*, or larger *Hop-hill*: Always as you place a row of Turfs

in

Or, An Appendix concerning Fruit-Trees, &c.

in compass, you must fill up the inner part of the Circle with the loose Earth of the second spit which you dig out of your Trench, and which is to be two foot and half wide, or more, as you desire to mount the hillock, which by this means you will have rais'd about your Plant near three foot in height. At the point it needs not be above two foot or eighteen inches diametre, where you may leave the Earth in form of a Dish, to convey the Rain towards the body of the Tree; and upon the top of this hillock prick up five or six small Briars or Thorns, linding them lightly to the body of the Plant, and you have finish'd the work.

The commodities of this kind of Planting are,

First, Neither Swine, nor Sheep, nor any other sort of Cattel can annoy your Trees.

Secondly, You may adventure to set the smaller Plants, being thus rais'd, and secur'd from the reach of Cattel.

Thirdly, Your Trees fasten in the Hillock against violence of Winds, without Stakes to fret and canker them.

Fourthly, If the soil be wet, it is hereby made healthy.

Fifthly, If very dry, the hillock defends from the outward heat.

Sixthly, It prevents the Couch-grass, which for the first years insensibly robs most plants in sandy grounds apt to graze. And,

Lastly, The grazing bank will recompence the niggardly Farmer for the waste of his Ditch, which otherwise he will sorely bethink.

In the second or third year (by what time your Roots spread) the Trench, if the Ground be moist, or Seasons wet, will be new fill'd up again by the treading of Cattel; for it need not be cleans'd; but then you must renew your Thorns: Yet if the Planter be curious, I should advise a casting of some small quantity of rich Mould into the bottom of the Trench the second year, which may improve the growth, and invite the Roots to spread.

In this manner of Planting, where the soil is not rich, the exact Planter should add a little quantity to each Root of Earth from a frequented High-way, or Yard where Cattel are kept; One Load will suffice for six or seven Trees; this being much more proper than rotted soil or loose Earth; the fat should best agreeing with the Apple Tree.

The broader and deeper your Ditch is, the higher will be your Bank, and the securer your Fence; but then you must add some good Earth in the second year, as before.

I must subjoin, that only Trees of an upright growth be thus planted in open grounds; because spreading of low growing Trees will be still within reach of Cattel as they increase: Nor have I met with any inconvenience in this kind of Transplanting (which is applicable to all sorts of Trees) but that the Mole and the Ant may find ready entertainment the first year, and sometime impairs a weak rooted Plant; otherwise it rarely mis-carries. In sum,

This manner of Fencing is soon executed by an indifferent Workman, who will easily set and guard six Trees in a Winter day. Thus far Mr. *Buckland*: To which we shall only add, That those which are planted in the *Hedg-rows* need none of these defences; for (I am

am told) in *Herefordshire* in the Plantations of their *Quick-fets*, or any other, all men did so *superstitiously* place a *Crab-stock* at every *twenty foot* distance, as if they had been under some rigorous *Statute* requiring it; and I am of Opinion, that 'twere better to be content with *Fruit* in the bordering *Mounds*, than to be at all this trouble to raise *Tumps*, or temporary banks in the midst of an *Inclosure*; or if *Pears* will thrive in the Plain of the *Ortyard*, as we frequently see them. (where neither *Apple* or other *Fruit* could in appearance be expected) then *Crabs*, which may be raised on the *Mounds*, will kindly mix the *Liquor* into very good *Beverage*.

CHAP. VIII.

Of Pruning and Use of the Fruit-Trees.

THe *Branches* are to be lopp'd in proportion to the bruises of the *Roots*, whose *fibres* else should only be quickned, not altogether cut off nor intangled: For the *Top*, let a little of each arm be lopp'd in *Cider-fruit* only; but for the *Pears*, cut two or three *buds* deep at the summities of their aspiring *Branches*, just above the *eye* slanting; this will keep them from over-hasty mounting, reduce them into *shape*, and accelerate their *bearing*.

To this we add again out of Dr. *Beals Herefordshire Orchards*, pag. 23. In a grafted plant every Bough should be lopped at the very tops, in Apples and Pears, as in Cherries and Plums, if Transplanted without violation of *Roots*, which only indeed renders it less necessary.

In most kinds of natural Plants the Boughs should not at all be lopped, but some taken off close to the Trunk, that the Root at first Transplantation be not engaged to maintain too many Suckers, this to be understood, though of such as grow naturally from the *Kernel*, or the *Bur-knot*; especially if removed after they are well rooted. And this must be done with such discretion, that the *Top-branches* be not too close together; for the natural Plant is apt to grow spiry, and thereby fails of fruitfulness. Therefore let the reserved Branches be divided at a convenient roundness.

The Branches of those we call natural Plants (for usually the Grafted generally fail) that are cut off, may be set, and will grow, though slowly.

If the *Top* prove spiry, or the fruit unkind, then the due remedy must be in re-grafting. See Chap. xxviii. in *Sylva*.

Besides the *Perrys*, dried and preserv'd Fruit, useful is the *Pear-Tree* (and best the most barren, or *Pig-taile*, as they call it, which is the *Wild Pyrafter*) for its excellent colour'd Timber, hard and levigable (seldom or not ordinarily worm-eaten) especially for Stools,

Stools, *Tables*, *Chairs*, *Pistol-Stocks*, *Instrument-Maker*, *Cabinets*, and very many works of the *Joyner*, (who can make it easily to counterfeit *Ebony*) and *Sculptor*, either for flat, or embossed Works, and to Engrave upon, because the Grain intercepts not the Tool. And so is likewise both the *Black-Cherry* (especially for the Necks of Musical-Instruments) and the *Plum-Tree*.

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I*F some of the following Discourses seem less constant, or (upon occasion) repugnant to one another, they are to be consider'd as relating only to the several gusts, and quizes of Persons and Countries, and not to be looked upon as recommended Secrets, much less impos'd, farther than upon Tryal they may prove grateful to the Publick, and the different inclinations of those who affect these Drinks: nor in reason ought any to decry what is propos'd for the universal Benefit; since it costs them nothing but their civility to so many obliging Persons.*

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GENERAL ADVERTISEMENTS
 . CONCERNING
CIDER:
 By D^r B E A L E.

1. **H**E that would treat exactly of *Cider* and *Perry*, must lay his foundation so deep as to begin with the *Soyl*: For as no Culture or Graffs will exalt the *French Wines* to compare with the *Wines of Greece*, *Canaries*, and *Montefiasco*; so neither will the *Cider* of *Bromyard* and *Ledbury* equal that of *Ham lacy*, and *Kings-Capell*, in the same small County of *Hereford*.

2. Yet the choice of the *Graff* or *Fruit* hath so much of prevalence, that the *Red-stroke-Cider* will every where excel common *Cider*, as the *Grape* of *Frontignac*, *Canary*, or *Baccharach*, excels the common *French Grape*; at least, till by time and traduction it degenerateth.

3. I cannot divine what *Soil* or what *Fruit* would yield the best *Cider*; or, how excellent *Cider* or *Perry* might be if all *Soils* in common and all *Fruit* were tried; but for thirty years I have tried all sorts of *Cider* in *Hereford-shire*, and for three years I have tried the best *Cider* in *Somerfet-shire*; and for some years I have had the best *Cider* of *Kent* and *Essex* at my call; yet hitherto I have always found the *Cider* of *Hereford-shire* the best, and so adjudged by all good *Palates*. But I shall rejoice to be better informed, and truly from all other *Countries*; and do both wish and hope, that in a short time, we shall every where be rich in many *Improvements*.

4. I cannot undertake to particularize all kind of *Soil*, no more than to compute how many *Syllables* may be drawn from the *Alphabet*; the number of *Alphabetical Elements* being better known than the *Ingredients* and *Particles* of *Soil*, as *Chalk*, *Clay*, *Gravel*, *Sand*, *Marle*, (the tenaciousness, colour, and innumerable other qualities, shewing endless diversities;) and the *Fruit* of *Crabs*, *Apples*, and *Pears*, being as various as of *Grapes*, *Figs*, and *Plums*.

5. Yet in grofs, this I note; That as *Bacchus amat colles*, and a light ground, so our best *Cider* comes from the hot *Rie-Lands*: In sat *Wheat-Land* it is more sluggish; and in white, stiff *Clay-Land* (as in *Woollhope* in *Hereford-shire*) the common *Cider* retains a thick

thick whey-colour, and not good: Only such as riseth there (by the diligence or some *Art* of the *Inhabitants*) is bright and clear, and so lively, that they are apt to challenge the best.

6. Some *Cider* mixeth kindly with *Water* in the *Cider-mill*, and will hold out a good small *Wine*, and less inflaming, all the following *Summer*. Some *Cider* (as of *Long-hope*, a kind of four *Wood-Land* Country of *Herefordshire*) will not bear any mixture of *Water*, but soon decay, and turn more harsh and sour: And thus we noted in *France*, some coarse *Wines* stuck like paint in the *Grass*, unwilling to incorporate with the *Water*: *Vin d'Aye*, and other delicate *Wines*, did spread themselves more freely, as *gold* is more ductile than baser *metals*.

7. Some would, for a fit, extol the *Cider* of *Pearmains*, some of *Pepins*; (and of *Pepins* I have found a congenial *Liquor*, less afflicting *splenetic* persons, as in mine own experience I conceived:) And Sir *Henry Lingens* once extolled the *Cider* of *Eleots* (as richly bedewing the *Gla's* like the best *Canaries*;) and full *Hogheads* of the *Stocking-Apple* have been tried amongst us, but disappointing our expectation, though perhaps by evil ordering: Yet Mr. *Gristen* highly boasted a Mixture of *Stocking-Apples* and *Mis-Pears*, tried (as I take it) by himself: After many years trial of those and many other kinds, the *Red-strake* carried the common fame, and from most of those reduced admirers: The *Gennet-Moyl Cider* was indeed more acceptable to tender *Palats*; and it will require *Custom* and *Judgment* to understand the preferency of the *Red-strake*, whose mordicant sweetness most agreeably gives the farewell, endearing the relish to all flagrant *Palats*; which both obliges, whets, and sharpens the *stomach* with its masculine and *winy* vigour; and many thousands extol it for exceeding the ordinary *French-Wine*: But grant it should not be so strong as *Wine*; let me ask how many sober persons abroad addict themselves to meer *Wine*? Then compare *this* with diluted *Wine*, as usually for temperate men, and then let the trial be made, whether the *Pepin-Cider* or *Red-strake* will retain the *winy* vigour in greater proportion of *Water*. Add to this, That they commonly mingle *Water* in the *Press* with *Apples* (a good quantity) whiles they grinde the *Apple*; and the *Water* thus mixed, at that time, does so pleasingly incorporate in the grinding, fermentation, and maturity of *Vessels*, that 'tis quite another and far more pleasant thing than if so much or half so much *Water* were mingled in the *Cup* at the drinking time; as *Salt* on the *Trencher* will not give *Beef*, *Pork*, or *Neats-Tongue*, half that same relish which duly powder'd and time-ly season'd.

8. I did once prefer the *Gennet-moyl Cider*, but had only the *Ladies* on my side, as gentler for their fugary *palats*, and for one or two sober draughts; but I saw cause to recant, and to confess the *Red-strake* to warm and whet the *Stomach*, either for *meat* or more *drink*.

9. The right *Cider-fruit* is far more succulent, and the *Liquor* more easily divides from the *pulpe* of the *Apple*, than in best *Table-fruit*,

fruit, in which the juice and the pulp seem friendly to dissolve together on the tongues end.

10. The *Liquor* of best *Cider-fruit* in the *Apple*, in best season of ripeness, is more brisk and smart than that which proves duller *Cider*: And generally the fiercest *Pears*, and a kind of tamer *Crabs*, (and such was the *Red-strake* called in my memory) makes the more *winy Cider*.

11. *Palladius* denieth *Perry* to bear the heat of *Summer*; but there is a *Pear* in *Bosbury*, and that Neighbourhood, which yields the *Liquor* richer the second year than the first, and so by my experience very much amended the third year: They talk much higher; but that's beyond my account.

12. As *Cider* is for some time a sluggard, so by like care it may be retained to keep the *Memorials* of many *Consuls*; and these smoaky bottles are the *nappy Wine*. My Lord *Scudamore* seldom fails of three or four years; and he is nobly liberal to offer the *Trial*.

13. As *red Apples*, so *red Pears* (and amongst them the red *Horspear* next to the *Bosbury*) have held out best for the stomach and durance: But *Pears* do less gratifie the stomach than *Apples*.

14. The season of grinding these harsh *Pears* is after a full maturity, not till they have dropt from the Tree, and there lain under the Tree, or in heaps, a week, or thereabouts.

15. And so of *Cider-Apples*, as of *Grapes*, they require full maturity, which is best known by their natural fragrance; and then also, as ripe *Grapes* require a few mellowing days, so do all *Apples*, as about a week or little more, so they be not bruised, which soon turns to rottenness; and better found from the Tree than rotten from the heap; though yet the juice of *Apples* and *Pears* (yea, of *Cherries* or *Grapes*) is not altogether destroy'd, or quite putrified, as soon as the *Pulp* seems to be corrupted; neither haply needs there such curiosity, to cull and pick them so accurately, as some prescribe, though doubtless the cleaner, and less contaminated, the better.

16. That due maturity, and some rest on the heap, does make the *Liquor* taste rather of *Apples* than *winy*, hath no more truth, (if the *Cider* be kept to fitage) than that very old *Cheese* doth taste of a *Posset*.

17. The harsher the *wild-fruit* is, the longer it must lye on heaps; for of the same fruit, suddenly ground, I have tasted good *Ver-juice*; being on heaps till near *Christmas*, all good-fellows called it *Rhenish wine*.

18. The Grinding is somewhat considerable, rather too much than too little; here I saw a *Mill* in *Somersetshire* which grinds half a *Hoghead* at a grist, and so much the better ground for the frequent rolling.

19. * Soon after grinding it should be press'd, and immediately be put into the *Vessel*, that it may ferment before the *spirits* be diffused; and then also in fermenting time the *Vent-hole* should not be of it up.

* See for This, excellent directions in Mr. Newburghs preferring of the lurtace; C. Taylors Vessel, and Dr Smiths closing be of it up.

before wide as to allow a prodigal waste of the spirits; and as soon as the ferment begins to allay, the vessels should be filled of the same, and well stopped.

20. Of late 'tis much commended, that before it be prest the Liquor and Must should for four and twenty hours ferment together in a Vat for that purpose, covered, as Ale or Beer in the Tst-vat, and then tunned up. This is said to enrich the liquor, and to give it somewhat of the tincture of some red Apples, as I have seen, and very well approved.

21. As Sulphur hath some use in Wines, so some do lay Brimstone on a ragge, and by a wire let it down into the Cider-Vessel and there fire it; and when the Vessel is full of the smoak, the liquor speedily poured in ferments the better. I cannot condemn this, for Sulphur is more kind to the Lungs than Cider, and the impurity will be discharged in the ferment.

22. Apples over-long hoarded before grinding will for a long time hold the liquor thick; and this liquor will be both pleasant, and as I think, wholesome; and we see some rich Wines of the later Vintage, and from Greece, retain a like crassitude, and they are both meat and drink.

23. I have seen thick harsh Cider the second Summer become clear and very richly pleasant; but I never saw clear acid Cider recover.

24. Wheat or Leven is good and kind in Cider, as in Beer; Juniper-berries agree well and friendly for Coughs, weak Lungs, and the aged, but not at first for every Palate: The most infallible and undiscerned improver, is Mustard a Pint to each Hoghead, bruised, as for sauce, with a mixture of the same Cider, and applied as soon as the Vessel is to be closed after fermenting.

25. Bottling is the next improver, and proper for Cider; some put two or three Raisins into every Bottle, which is to seek aid from the Vine. Here in Somersetshire I have seen as much as a Wal nut of Sugar, not without cause, used for this Country Cider.

26. Crabs do not hasten the decay of Perry, but preserve it, as Salt preserves flesh. But Pears and Crabs being of a thousand kinds require more Aphorisms; this only I would Note, that Land which refuse Apples, is generally civil to Pears, and Crabs mingled with them, make a rich and wholesome Cider, and has sometimes challenged even the best Red-Strake.

27. Neither Wheat, Leven, Sulphur, nor Mustard, are used but by very few; and therefore are not necessary to make Cider last well, for two, three, or four years.

28. The time of drawing Cider into Bottles is best in March, it being then clarified by the Winter, and free from the heat of the Sun.

29. In drawing, the best is neerest the heart or middle of the Vessel, as the Telk in the Egge.

30. Red-strakes are of divers kinds, but the name is in Herefordshire appropriated to one kind, which is fair and large, of a high purple colour, the smell Aromaticall, the Tree a very shrub, soon

soon bearing a full burden, and seldom or never failing till it decays, which is much sooner than other Apple-trees. 'Tis lately spread all over Herefordshire; and he that computes speedy return, and true Wine, will think of no other Cider-Apple, till a better be found.

31. I said the Red Strake is a small shrub, 'tis of small growth where the Cider proves richest, for ought we have yet seen in Herefordshire, viz. in light quick land; and if the land be very dry, june and shallow, that and other Cist (especially the Genet-moyle) will suspend the store of fruit alternatively every other year; except some Blasts or surprizing Frosts in the Spring alter that Method; for two bad years seldom come together, very hardly three.

32. In good soil, I mean of common field (for fat land is not best for Cider-fruit, but common arable) I have seen the Trees of good growth, almost equalling other Cider-trees, the Apple larger and seldom failing of a good burthen: thus in the Vales of Wheat-lands, in strong Glebe or Clay, where the Cider is not so much extolled: but still Sack is Sack, and Canary differs from Claret; so does the Red-Strake Cider of the Vale excell any other Cider of the foresaid soil, such as is already celebrated for its kindness to good Cider.

33. Yet this distinction of Soil requires much experience, and great heed, if we insist upon accurate directions; for as Lauremberg saith, in pingui solo non feruntur omnia recte, neq. in macro nihil. And for Gardens, Flowers, and Orchards, I would chuse many times such lands as do not please the Husbandman, either for Wheat or sweet Pasture, which are his chief aims; and thus Lauremberg, In Arida & tenui terra felicitus proveniunt Ruta, Allium, Petroselinum, Crocus, Hyssopus, Capparis, Lupini, Satureia, Thymus; Arbores quosq. tenue & macilentum solum amant; itemq. frutices pleriq. Hujusmodi arbores sunt, Pomus, Pyrus, Cerasus, Prunus, Persica, Cotonea, Acorus, Juglans, Corylus, Staphylodendrum, Mespilus, Ornus, Castanea, &c. Frutices, scil. Vitis, Berberis, Genista, Juniperus, Oxyacantha, Periclymenum, Rosa, Ribesum, Uva, Spina, Vactinia, &c.

34. But here also we must distinguish, that Pears will bear in a very stony, hungry, gravelly land, such as Apples will not bear in; and I have seen Pears bear in a tough binding hungry Clay, when Apples could not so well bear it (as the smooth rinds of the Pear-trees, and the Mossie and cankered rinds of the Apple trees did prove) the root of a Pear-tree being it seems more able to pierce a stony and stiff ground. And Cherries, Mulberries and Plums can rejoyce in a richer soil, though by the smallness of the Roots, the staller soil will suffice them. And the Quinces require a deeper ground, and will bear with some degrees of hungry land, if they be supplied with a due measure of succulency, and neighbouring moisture; and the other shrubs, according to the smallness of their roots, do generally bear a thinner land. I have seen a soil so much too rank for Apples and Plums, that all their fruits from year to year were

always worm-eaten, till their lives were forfeited to the fire.

35. To take up from these *Curiosities*, the most useful result to our purpose; we have always found these *Orchards* to grow best, last longest, and bear most, which are frequently tilled for *Barley*, *Wheat*, or other *Corn*, and kept (by *Culture* and seasonable rest) in due strength to bear a full crop. And therefore, whereas the *Red-strake* might otherwise without much injury be planted at fifteen or twenty foot distance, and the best distance for other *Cider-fruit* hath heretofore been reputed thirty, or two and thirty foot; very good husbands do now allow in their largest *Inclosures* (as of 20, 40 or 100 Acres) fifty or sixty foot distance, that the *Trees* may not much hinder the *Plow*, and yet receive the benefit of *Compost*; and a *Horse-team* well governed will (without any damage of danger) plow close to the *Trees*.

36. In such soil as is here required, namely of good *Tillage*, an *Orchard* of grafted *Red-strakes* will be of good growth, and good burthen. within ten or twelve years, and branch out with good store to begin an encouragement at three years *grafting*; and (except the land be very unkind) will not yield to any decay within sixty or eighty years, which is a mans age.

37. In some *sheets* I rendred many Reasons against Mr. *Ausfrink* of *Oxford*, why we should prefer a peculiar *Cider fruit*, which in *Heresfordshire* are generally called *Musts*; (so we name both the *Apple* and the *Liquor*, and *Pulse* as mingled together in the confusion) as from the *Latine Mustum*. *White-Musts* of divers kinds, *Red-cheek'd* and *Red-strak'd Musts* of several kinds, *Green-Musts* called also *Green-fillet*, and *Blew-spotted*: Why, I say, we should prefer them for *Cider*, before *Table-fruit*, as *Pepins*, *Pearmains*, &c. And I do still insist on them: 1. The *Liquor* of these *Cider-fruits* and of many kinds of austere fruit, which are no better than a sort of full succulent *Crabs*, is more sprightly, brisk and *winy*. For Essay, I sent up many bottles to *London*, that did me no discredit. Secondly, One bushel of the *Cider-fruit* yields twice or thrice as much liquor. Thirdly, The *Tree* grows more in three or four years than the other in ten years, as I oft times remarked. Fourthly, The *Tree* bears far greater store, and doth more generally escape *Blasts* and *Frosts* of the *Spring*. I might add, that some of these, and especially such *Pears* as yield the best *Perry*, will best escape the hand of the *Thief*, and may be trusted in the open field.

38. By the first, second and fourth of these Reasons, I must exclude the *Gennet-Moyle* from a right *Cider fruit*, it being dry and very apt to take frosty blasts; yet it is no *Table-fruit*, but properly a baking fruit, as the ruddy colour from the *Oven* shews.

39. I said that the right *Cider-fruit* generally called *Musts*, and deterring the *Latine* name *Mustum*, is of divers kinds; and I have need to note more expressly that there is a *Red-strak'd Must* (as I have often seen) but not generally known, that is quite differing from the famous *Red-strake*, being much less, somewhat oblong and like some of the white *Musts* in shape, and full of a very good *winy liquor*. I could willingly name the persons and place where the

the distinct kinds are best known: it was first shewed me by *John Nash* of *Ashperton* in *Heresfordshire*; and for some years they did in some places distinguish a *Red-strake*, as yielding a richer *Red-strak'd Cider* of a more fulvous or ruddy colour; but this difference, as far as I could find, is but a choice of a better insolated or ruddy fruit of the best kind, as taken from the south part of the *Tree*, or from a soil that renders them richer. But my Lord *Scudamore's* is safely of the best sort; and M. *Whingate* of the *Grange* in *Dimoc*, and some of *King's-capel*, do best know these and other differences, *Straked-Must*, right *Red-strake*, *Red-Redstrake*, &c.

40. The greenish *Must*, (formerly called in the *Language* of the *Country*, the *Green-fillet*) when the *Liquor* is of a kindly ripeness, retains a greeness equal to the *Rhenish glass*; which I note for them that conceive no *Cider* to be fit for use till it be of the colour of old *Sack*.

41. To direct a little more caution, for enquiry of the right *Red-strake*, I should give notice that some Months ago, Mr. *Philips* of *Mountague* in *Somersetshire*, shewed me a very fair large *Red-strake Apple*, that by smell and sight seemed to me and to another of *Heresfordshire* then with me to be the best *Red-strake*; but when we did cut it, and taste it, we both denied it to be right (the other with much more confidence than my self) but M. *Philips* making *Cider* of it, this week invited me to it, assuring that already it equals or resembles *High-country-wines*. It had not such plenty of juice as our *Red-strakes* with us, and it had more of the pleasantness of *Table-fruit*, which might be occasioned, for ought I know, by the purer and quicker soil. This *Apple* is here call'd *Meriot-Tsnot*, and great store of them are at *Meriot*, a *Village* not far distant: Possibly, this *Meriot* may prove to be the *Red-strake* of *Somersetshire*, when they shall please to try it apart with equal diligence and constancy as they do in *Heresfordshire*: This fruit is of a very lovely hue, and by some conceived to be of affinity to the *Red-Jersey Apple*, which is reported to tinge so deeply: In truth, there can hardly be a deeper Purple, than is our right *Heresfordshire Red-strake*, having a few streaks towards the *Eye*, of a dark colour, or *Orange-tawny* intermingled: But, 'tis no wonder if an *Apple* should change its Name in travelling so far beyond the *Severn*, when even in this *Country*, most sorts of *Apples*, and especially, *Cider-fruit*, loseth the Name in the next *Village*.

42. I may now ask why we should talk of other *Cider-fruit* or *Perry*, if the best *Red-strake* have all the aforesaid pre-eminencies of richer and more *winy liquor*, by half sooner an *Orchard*, more constantly bearing, &c. An *Orchard* of *Red-strakes* is commonly as full of fruit at ten years, as other *Cider-fruit* at twenty years, or as the *Pepin* and *Pearmain* at thirty or thereabout.

43. To this may be answered, that all soils bear not *Apples*, and to some soils other *Apples* may be more kind, and if we be driven to *Perry*, much we may say both in behalf of the *Perry*, and of the *Pear*, of the fruit, and of the *Tree*; It is the goodlier *Tree* for a Grove, to shelter a house and walks from summers heat and Win-

ters cold Winds, and far more lasting; the pleasantest Cider-pear of a known name amongst them, is the *Horſe-pear*. And it is much argued, whether the *White-horſe-pear*, or the *Red-horſe-pear* be the better; where both are best, within two Miles they differ in judgment. The *Pear* bears almost its weight of sprightly *winy Liquor*; and I always preferred the *tawny* or *ruddy Horſe-pear*, and generally that colour in all *Pears* that are proper for *Perry*.

44. I rejected *Palladius* against the distableness of *Perry*; his words are, *Hyeme durat, sed prima aceſcit æſtate, Tit. 25. Febr.* possibly so of common *Pears*, and in hotter Countries; but from good *Cellars* I have tasted a very brisk lively and *winy liquor* of these *Horſe-pears* during the end of *Summer*; and a *Bosbury-pear* I have named and often tried, which without bottling, in common *Hogſ-heads* of vulgar and indifferent *Cellars*, proves as well pleasanter as richer the second year, and yet also better the third year. A very honest, worthy and witty *Gentleman* of that neighbourhood would engage to me, that in good *Cellars*, and in careful custody, it passeth any account of decay, and may be heightened to a kind of *Aqua-vitæ*. I take the information worthy the style of our modern improvements.

The *Pear-tree* grows in common fields and wild stony ground, to the largeness of bearing one, two, three or four *Hogſ-heads* each year.

45. This *Bosbury-tree*, and such generally that bear the most lasting *Liquor* and *winy*, is of such unsufferable taste, that hungry *Swine* will not smell to it; or if hunger tempt them to taste, at first crush they shake it out of their mouths; (I say not this of the *Horſe-pear*) and the *Clowns* call other *Pears*, of best *Liquor*, *Choak-pears*, and will offer money to such as dare adventure to taste them, for their sport; and their mouths will be more stupified than at the root of *Wake-robin*.

46. A row of *Crab-trees* will give an improvement to any kind of *Perry*; and since *Pears* and *Crabs* may be of as many kinds as there are kernels, or different kinds or mixtures of soils; in a general Character I would prefer the largest and fullest of all austere juices.

47. M. Lill of *Mark-hill* (aged about 90 years) ever observed this Rule, to graff no wild *Pear-tree* till he saw the fruit; if it proved large, juicy, and brisk, it failed not of good *Liquor*. But I see cause to say, that to graff a young tree with a riper graff, and known excellency, is a sure gain and hastens the return.

48. M. Speke (last high Sheriff of *Somersetshire*) shewed me in his Park some store of *Crab-trees*, of such huge Bulk, that in this fertile year he offered a wager, that they would yield one or two *Hogſ-heads* of *Liquor* each of them; yet were they small dry *Crabs*.

49. I have seen several sorts of *Crabs* (which are the natural *Apple*, or at worst but the *wild-Apple*) which are as large as many sorts of *Apples*, and the *Liquor* *winy*.

50. I have disclaimed the Gist of *Juniper-berries* in *Cider*; I tried

tried it only once for myself, and drank it before *Christmas*: possibly in more time the relish had been subdued or improved, as of *Hops* in *ſtale Beer*, and of *Rennet* in good *Parmasan*. Neither was the Gist to me otherwise unpleasant than as *Anniſe-seeds* in *Bread*, rather strange than odious; and by custom made grateful, and it did halt the clarification, and increase the briskness to an endless sparkling; thus it indulgeth the Lungs, and nothing more cheap; where *Juniper* grows a Girl may speedily fill her lap with the *Berries*.

If *Barbados* *Ginger* be good, cheaper, and a more pleasant preserver of *Beer*, it must probably be most kind for *Cider*: For first, of all the improvers that I could name, bruised *Mustard* was the best; and this *Ginger* hath the same quick, mordant vigour, in a more noble and more *Aromaticque* fragrance. Secondly, *Cider* (as I oft complain) is of a sluggish and somewhat windy nature; and for some Months the best of it is chain'd up with a cold ligature, as we fancy the fire to be lock'd up in a cold *Flint*. This will relieve the prisoner. And thirdly, will assist the *winy* vigour for them that would use it instead of a sparkling *Wine*. Fourthly, 'Tis a good sign of much kindness, and great friendship: it will both enliven the ferment for speedier maturity, and also hold it out for more durations both which offices it performs in *Beer*.

51. *Cider* being windy before maturity, some that must not wait the leisure of best season do put sprigs of *Rose-mary* and *Bays* in the Vessel; the first good for the head, and not unpleasant; the second, an Antidote against Infections; but less pleasant till time hath incorporated the Tastes.

52. And why may we not make mention of all these Mixtures, as well as the Ancients of their *Vinum Marrubii*, *Vinum Abrotanites*, *Absynthites*, *Hyssopites*, *Marathites*, *Thymites*, *Cydonites*, *Myrtites*, *Scillites*, *Violaceum*, *Sorbi*, &c.

53. And, for mixtures, I think we may challenge the Ancients, in naming the *Red-raspberry*; of which there is in this County a Lady that makes a *Bonell's*, the best of *Summer drinks*. And more yet if we name the *Clove-july-flower*, or other *july-flowers*, a most grateful *Cordial*, as it is infused by a Lady in *Staffordshire*, of the Family of the *Devereux's*, and by some Ladies of this Country.

54. I could also give some account of *Cherry-wine*, and *Wine* of *Plums*; the last of which (in the best Essay that I have yet seen) is hardly worthy to be named: But, I conceive, and have ground for it, that some good *Liquor* and *Spirits* may be drawn from some sorts of them, and in quantity: And the vast store of *Cherrys* in some places, under a penny the pound, and of *Plums* that bend the Trees with their burdens, and their expedite growth makes it cheap enough, and as in the other, so in these, the large *Engliſh* or *Dutch* sharp *Cherry*, makes the *Cherry-wine*, and the full black, tawny *Plum*, as big as a *Walnut* (not the kind of *Heart-Cherrys*, nor the *Plum* which divides from the stone) make the *Wine*. Their cheapness should recommend them to more general use at *Tables*, when dried like *Prunell's* (an easie art) and then wholesomer.

55. To return for *Red-strake*; 'tis a good drink as soon as well fermented, or within a *Moneth*, better after some *Frosts*, and when clarified; rich *Wine*, when it takes the colour of old *Sack*. In a good *Cellar* it improves in *Hogheads* the second year; in *Bottles* and *sandy Cellars* keeps the *Records* of late *revolutions* and old *Majoralties*. *Quere* the manner of laying them up in *sand-houses*.

56. I tried some *Bottles* all a *Summer* in the bottom of a *Fountain*; and I prefer that way where it may be had. And 'tis somewhat strange if the Land be neither dry for a *sand-house*, nor *fountainous* for this better expedient. When *Cider* is fertl'd, and altogether, or almost clarifi'd, then to make it *sprigbiful* and *winy*, it should be drawn into well cork'd and well bound *bottles* and kept some time in *sand* or *water*; the longer the better, if the kind be good. And *Cider* being preserved to due *age*, bottl'd (and kept in cool places, *conservatories*, and *refrigerating* springs) it does almost by time turn to *Aqua-vitæ*; the *Bottles* smok at the opening, and it catches *flame* speedily, and will burn like *spirit* of *VVine*, with a fiery taste; and it is a laudable way of trying the vigour of *Cider* by its promptness to *burn*, and take *fire*, and from the quantity of *Aqua-vitæ* which it yields. *Cider* affords by way of *Distillation*, an incomparable and useful *Spirit*, and that in such plenty, as from four *Quarts*, a full *Pint* has been extracted.

57. I must not prescribe to other *Palats*, by asserting to what degree of *Perfection* good *Cider* may be raised, or to compare it with *VVines*: But when the late *King* (of blessed memory) came to *Hereford* in his distress, and such of the *Gentry* of *Worcestershire* as were brought thither as *Prisoners*; both *King*, *Nobility*, and *Gentry*, did prefer it before the best *VVines* those parts afforded; and to my knowledge that *Cider* had no kind of *Mixture*. Generally all the *Gentry* of *Herefordshire* do abhor all mixtures.

Yet if any man have a desire to try *conclusions*, and by an harmless *Art* to convert *Cider* into *Canary-wine*; let the *Cider* be of the former year, *Masculine* and in full body, yet pleasant and well tasted: into such *Cider* put a *spoonful*, or so, of the *Spirit* of *Clary*, it will have so much of the *race* of *Canary*, as may deceive some who pretend they have discerning *Palats*.

SIR

Sir PAUL NEIL'S
DISCOURSE
OF
CIDER.

My Lord,



N obedience to the *Commands* of this *Honourable Society*, I have at length endeavoured to give this brief *Account* of that little which I know concerning the *Ordering* of *Cider*; and in that I shall propound to my self *six* things.

First, To shew that *Cider* made of the best *Eating-apples* must needs be *once* the best; (that is to say) the pleasantest *Cider*.

Secondly, That hitherto the general opinion hath been otherwise, and that the reason of that mistake was the not apprehending the true cause why the *Pepin-cider*, &c. did not retain its sweetness, when the *Hard-apple-cider* did.

Thirdly, What is the true cause that *Pepin-cider*, used in the ordinary method, will not retain its sweetness.

Fourthly, How to cure that evil in *Pepin-cider*.

Fifthly, A probable conjecture, how in some degree by the same *Method* to amend the *Hard-apple-cider*, and *French-Wine*.

Sixthly, That what is here propounded cannot chuse but be *wholsome*, and may be done to what degree every mans *Palate* shall wish.

Having now told your *Lordship*, what I will endeavour to do before I enter upon it, I must declare what I will not in the least pretend to do.

1. I do not pretend to any thing concerning the *planting* and *grafting* of *Trees*, &c.

Nor what *Trees* will soonest bear or last longest.

Nor what *sorts* of *Trees* are the best bearers, and may with least danger grow in *Common fields*.

Nor what *sort* of *fruit* will yield the greatest store of *Cider*.

Nor what *Cider* will keep the longest, and be the strongest, and wholesomest to drink constantly with *meat*.

The

The only thing I shall endeavour, being to prescribe a way to make a sort of *Cider* pleasant and quick of taste, and yet wholesome to *drink*, sometimes, and in a moderate proportion: For, if this be an *Herese*, I must confess my self guilty; that I prefer *Cannary wine*, *Verdea*, the pleasantest *Wines* of *Greece*, and the *High-country-wines* before the *harsh Sherries*, *Vin de Hermitage*, and the *Italian* and *Portugal rough Wines*, or the best *Graves-wines*; not at all regarding that I am told, and do believe, that these *harsh wines* are more comfortable to the *Stomach*, and a *Surfeit* of them less *noxious*, when taken; nor to be taken but with drinking greater quantities than can with safety be taken of those other pleasant *Wines*: I satisfy myself with this, that I like the pleasant *Wines* best; which yet are so wholesome, that a man may drink a moderate quantity of them without prejudice.

Nor shall I at all concern myself, whether this sort of *Cider* I pretend to is so *vinous* a liquor; and consequently will yield so much *spirit* upon *Distillation*, or so soon make the *Country-man* think himself a *Lord*, as the *Hard-apple-cider* will do: nor whether it will last so long; for it is no part of my design to persuade the *World* to lay by the making of *Hard-apple-cider*; but rather in a degree to shew how to improve that in point of pleasantness, and that by the making and rightly ordering of *Cider* of the best *Eating-Apples*; as *Golden-pepins*, *Kewish-pepins*, *Pear-mains*, &c. there may be made a more pleasant liquor for the time it will last, than can be produced from those *Apples* which I call *Hard-Apples*, that is to say, *Red-strakes*, *Gennet-moyles*, the *Broms-lury-Crab*, &c. which are so *harsh* that a *Hog* will hardly eat them.

Nor shall I at all meddle with the making of *Perry*, or of any mixed drink of the juice of *Apples* and *Pears*; though possibly what I shall say for *Cider* may be aptly applied to *Perry* also.

For the first particular, I asserted that the best *Apples* would make the pleasantest, which in my sense is the best *Cider*; (and I account those the best *Apples*, whose juice is the pleasantest at the time when first pressed, before fermentation) I shall need (besides the experience of the last ten years) only to say, that it is an undeniable thing in all *Wines*, that the pleasantest *Grapes* make the richest and pleasantest *Wines*; and that *Cider* is really but the *Wine* of *Apples*, and not only made by the same way of *Compressi-on*; but left to itself hath the same way of *Fermentation*; and therefore must be liable to the same measures in the choice of the materials.

To my second Assertion, that this truth was not formerly owned, by reason that in *Herefordshire*, and those Countries where they abound both with *Pepins* and *hard-apples* of all sorts, they made *Cider* of both sorts, and used them alike; that is, that as soon as they ground and pressed the *Apples* and strained the *Liquor*, they put it into their *Vessels* and there let it lye till it had wrought, and afterwards was settled again and *fin'd*; as not thinking it wholesome to drink till it had thus (as they call it) *purg'd* it self, and

and this was the frequent use of most men in the more *Southern* and *Western* parts of *England* also. Now when *Cider* is thus used, it is no wonder that when they came to broach it, they for the most part found their *Pepin-cider* not so pleasant as their *Moyle* or *Red-strake cider*; but to them it seem'd a wonder, because they did not know the reason of it (which shall be my next work to make out) for till they knew the reason of this effect, they had no cause but to think it was the nature of the several *Apples* that produced it; and consequently to prefer the *Hard-Apple-cider*, and to use the other *Apples* (which were good to eat raw) for the *Table*: which was an use not less necessary, and for which the *hard-apples* were totally improper.

To my third Assertion, which is, that in *Herefordshire* they knew not what was the true cause why their *Pepin-cider* (for by that name I shall generally call all sorts of *Cider* that is made of *Apples* good to eat raw) was not, as they used it, so good as the *Cider* made of *hard-apples* (for by that name, for brevities sake, I shall call the *Cider* of *Moyle*, *Red-strake*, and all other sorts of *harsh Apples*, not fit to eat raw.) First, I say, for all *liquors* that are *vinous*, the cause that makes them sometimes harder or less pleasant to the taste, than they were at the first pressing, is the too much fermenting: If *Wine* or *Cider* by any accidental cause do ferment twice, it will be harder than if it had fermented but once; and if it ferment thrice, it is harder and worse than if it had fermented but twice: and so onward, the oftner it ferments and the longer it ferments, it still grows the harder. This being laid as a foundation, before we proceed further we must first consider what is the cause of fermentation in *Wine*, *Cider*, and all other *vinous Liquors*. Which (in my poor opinion) is the gross part of the *Liquor*, which escapes in the straining of the *Cider* (for in making of *Wine*, I do not find that they use the curiosity of straining) and which is generally known by the name of the *Lee* of that (*Wine* or) *Cider*. And this *Lee* I shall, according to its thickness of parts, distinguish into the gross *Lee*, and the flying *Lee*.

Now, according to the old method of making and putting up of *Cider*, they took little care of putting up only the clear part of the *Cider* into their *Vessels* or *Cask*; but put them up thick and thin together, not at all regarding this separation; for experimentally they found that how thick soever they put it up, yet after it had thoroughly wrought or fermented and was settled again, it would still be clear; and perchance that which was put up the soonest after it was pressed and the thickest, would, when the fermentation was over, be the clearest, the briskest, and keep the longest. This made them confidently believe that it was not only not inconvenient to put it up quickly after the pressing, but in some degree necessary also to put it up soon after the pressing, so that it might have so much of the *Lee* mixed with it, that it might certainly, soon, and strongly put it into a fermentation, as the only means to make it wholesome, clean and brisk; and when it ci-

ther did not (or that they had reason to doubt) that it would not work or ferment strongly enough, they have used to put in *Mustard* or some other thing of like nature to increase the fermentation.

Now that which in *Cider* of *Pepins* hath been a cause of greater fermentation than in *Cider* of *Hard-Apples*, being both used after the former method, is this, that the *Pepins* being a softer fruit are in the *Mill* bruised into smaller particles than the harder sorts of *Apples*; and consequently more of those small parts pass the strainer in the *Pepin-Cider* than in the *Cider* of *Hard-apples*, which causeth a stronger fermentation, and (according to my former principle) a greater loss of the native sweetness than in that of *Hard-apple-cider*; and not only so, but the *Lee* of the *Hard-apple-cider* being compounded of greater particles than the *Lee* of the *Pepin-cider*, every individual particle is in it self of a greater weight than the particles of the *Lee* of the *Pepin-cider*; and consequently less apt to rise upon small motions, which produceth this effect; that when the fermentation of the *Hard-apple-cider* is once over, unless the Vessel be stirred, it seldom falls to a second fermentation; but in *Pepin-cider* it is otherwise: For if the gross *Lee* be still remaining with the *Cider*, it needs not the motion of the Vessel to cause a new fermentation, but every motion of the *Air* by a change of weather from dry to moist will cause a new fermentation, and consequently make it work till it hath destroyed it self by losing its native sweetness. And this alone hath been the cause, why commonly when they broach their *Pepin-cider* they find it so unpleasant, that generally the *Hard-apple-cider* is preferred before it, although at first it was not so pleasant as the *Pepin-cider*. Yet after this mischief hath prevailed over the *Pepin-cider*, it is no wonder to find the *Hard-apple-cider* remaining not only the stronger, but even the more pleasant tasted. This to me seems satisfactory for the discovery of the cause, why in *Heresfordshire* the *Hard-apple-cider* is preferred before the *Pepin-cider*. But perhaps it may by some be objected, that they have before the ten years, in which you pretend you found this to be the cause of spoiling the *Pepin-cider*, been in *Heresfordshire*, and tasted the best *Cider* that Country did afford; and yet it was not like the *Pepin-cider* they had before then tasted in other parts. To this I do answer, at present, briefly, that by some mistake, or chance, the maker of this *Pepin-cider*, which proved good, had done that, or somewhat like that, which under the next Assertion I shall set down, as a Method to cure the inconveniences which happen to *Pepin-cider*, by the suffering it to ferment too often, or too strongly; but till that be explained it would be improper to shew more fully what these particular accidents might possibly be, which (without the intention of those persons which made the *Cider*) caused it to prove much better than their expectation, or indeed better than any could afterwards make: they possibly assigning the goodness of that *Cider* to somewhat that was not really the cause of that effect.

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To justify my fourth Assertion, and shew a Method how to cure the inconveniency which happens to *Pepin-cider* by the over-working, I must first take notice of some things which I have been often told concerning *Wine*, and which indeed gave me the light to know what was the cause which had made *Pepin-cider* that had wrought long, *hard* when it came to be clear again. The thing I mean, is, that in divers parts, and even in France they make three sorts of *Wine* out of one and the same *Grapes*; that is, they first take the juice of the *Grapes* without any more pressing than what comes from their own weight in the *Vat*, and the bruising they have in putting into Vessel, which causeth the ripest of those *Grapes* to break, and the juice without any pressing at all makes the pleasantest and most delicate *Wine*: And if the *Grapes* were red, then is this first *Wine* very pale. The second sort they press a little, which makes a redder *Wine*, but neither so pleasant as the first, nor so harsh as the last, which is made by the utmost pressing of the very skins of the *Grapes*, and is by much more harsh, and of deeper colour than either of the other two. Now I presume the cause of this (at least in part) to be, that in the first sort of *Wine*, which hath little of the substance, beside the very juice of the *Grape*, there is little *Lee*, and consequently little fermentation; and because it doth not work long, it loseth but little of the original sweetness it had: The second sort being a little more pressed hath somewhat more of the substance of the *Grape* added to the juice; and therefore having more of that part which causeth fermentation put with it, ferments more strongly, and is therefore, when it hath done working, less pleasant than the first sort, which wrought less. And for the same reason the third sort being most of all pressed, hath most of the substance of the *Grape* mingled with the *Liquor*, and worketh the longest: but at the end of the working when it settles and is clear, it is much more harsh than either of the two first sorts. The thought of this made me first apprehend that the substance of the *Apple* mingled with the juice, was the cause of fermentation, which is really nothing else but an endeavour of the *Liquor* to free it self from those heterogeneous parts which are mingled with it: And where there is the greatest proportion of those dissimilar parts mingled with the *Liquor*, the endeavour of Nature must be the stronger, and take up more time to perfect the separation: which when finished leaves all the *Liquor* clear, and the gross parts settled to the bottom of the Vessel, which we call the *Lee*. Nor did this apprehension deceive me; for when I began (according to the Method which I shall hereafter set down) to separate a considerable part of the *Lee* from the *Cider* before it had fermented, I found it to retain a very great part of its original sweetness, more than it would have done if the *Lee* had not been taken away before the fermentation; and this not once, but constantly for seven years.

Now the Method which I used, was this: When the *Cider* was first strained, I put it into a great *Vat*, and there let it stand twenty four hours at least (sometimes more, if the *Apples* were more ripe

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than

than ordinary) and then at a *tap* before prepared in the *Vessel* three or four *inches* from the bottom I drew it into *pails*, and from thence filled the *Hoghead* (or lesser *Vessel*) and left the greatest part of the *Lee* behind; and during this time that the *Cider* stood in the *Vat*, I kept it as close covered with *hair-clothes* or *sacks* as I could; that so too much of the *spirits* might not evaporate.

Now possibly I might be asked why I did not, since I kept it so close in the *Vat*, put it at first into the *Vessel*? To which I answer, that had I put it at first into the *Vessel*, it would possibly (especially if the *weather* had chanced to prove wet and warm) have begun to *ferment* before that time had been expired; and then there would have been no possibility to have separated any part of the *gross Lee*, before the *fermentation* had been wholly finished; which keeping it only covered with these clothes was not in danger: For, though I kept it warm in some degree, yet some of the *spirits* had still liberty to *evaporate*; which had it been in the *Hoghead* with the *Bung* only open, they would not so freely have done; but in the first 24 *hours* it would have begun to *ferment*, and so my design had been fully lost: For those *spirits* if they had been too strongly *reverberated* into the *Liquor*, would have caused a *fermentation* before I could have taken away any part of the *gross Lee*. For the great *mystery* of the whole thing lies in this, to let so many of the *spirits* evaporate, that the *liquor* shall not *ferment* before the *gross Lee* be taken away; and yet to keep *spirits* enough to cause a *fermentation* when you would have it. For if you put it up as soon as it is *strained*, and do not let some of the *spirits* evaporate, and the *gross Lee* by its weight only to be separated without *fermentation*, it will *ferment* too much and lose its sweetness; and if none be left, it will not *ferment* at all; and then the *Cider* will be dead, flat and sour.

Then after it is put into the *Vessel*, and the *Vessel* fill'd all but a little (that is, about a *Gallon* or thereabout) I let it stand (the *Bung-hole* being left only covered with a *paper*, to keep out any dust or filth that might fall in) for 24 *hours* more; in which time the *gross* part of the *Lee* being formerly left in the *Vat*, it will not *ferment*, but you may draw it off by a *Tap* some two or three inches from the bottom of the *Vessel*, and in that second *Vessel* you may stop it up, and let it stand safely till it be fit to *Bottle*; and possibly that will be within a day or more: but of this time there is no certain measure to be given; there being so many things that will make it longer, or less while before it be fit to *bottle*. As for *Example*, If the *Apples* were *over-ripe* when you stamped them, or ground them in the *Atill*, it will be the longer before it will be clear enough to *Bottle*; or if the *weather* prove to be warmer or moister than ordinary: or that your *Apples* were of such kinds, as with the same force in the stamping or grinding they are broken into smaller *particles* than other *Apples* that were of harder kinds.

Now, for knowing when it is fit to *Bottle*, I know no certain *Rule* that can be given, but to *broach* the *Vessel* with a small *Piercer*, and in that *hole* fit a *peg*, and now and then (two or three times in a day)

day) draw a little, and see what fineness it is of; for when it is *bottled* it must not be perfectly *fine*; for if it be so, it will not *ferment* in the *bottle*, which gives it a fine quickness, and will make it *mantle* and *sparkle* in the *glass*, when you pour it out: And if it be too thick when it is *bottled*, then, when it hath stood some time in the *bottles* it will *ferment* so much that it may possibly either drive out the *Corks*, or break the *bottles*, or at least be of that sort (which some call *Potgun-drink*) that when you open the *bottles* it will fly about the house, and be so *windy* and *cutting* that it will be inconvenient to drink: For the right *temper* of *Bottle-Cider* is, that it *mantle* a little and *sparkle* when it is put out into the *glass*; but if it *froth* and *fly*, it was *bottled* too soon: Now the *temper* of the *Cider* is so nice, that it is very hard when you *bottle* it to foretell which of these two conditions it will have: but it is very easie within a few days after (that is to say, about a *week*, or so) to find its *temper* as to this point. For first, if it be *bottled* too soon; by this time it will begin to *ferment* in the *Bottles*, and in that case you must open the *Bottles*, and let them stand open two or three *minutes*, that that abundance of *spirits* may have *Vent*, which otherwise kept in would in a short time make it of that sort I called before *Potgun-drink*; but being let out, that danger will be avoided, and the *Cider* (without danger of breaking the *bottles*) will *keep* and *ferment*, but not too much. Now this is so easie a *remedy*, that I would advise all men rather to erre on the hand of *bottling* it too soon, than let it be too *fine* when they *bottle* it; for if so, it will not *ferment* in the *bottle* at all; and consequently, want that *briskness* which is desirable.

Yet even in this case there is a *Remedy*, but such a one as I am always very careful to avoid, that so I may have nothing (how little soever) in the *Cider* but the *juice* of the *Apple*: But the *remedy* is, in case you be put to a necessity to use it, that you open every *bottle* after it hath been *bottled* about a week or so, and put into each *bottle* a little piece of *white sugar*, about the bigness of a *Nutmeg*, and this will set it into a little *fermentation*, and give it that *briskness* which otherwise it would have wanted. But the other way being full as easie, and then nothing to be added but the *juice* of the *Apple* to be simply the substance of your *Cider*, I chuse to prefer the error of being in danger to *bottle* the *Cider* too soon, rather than too late: Nay sometimes in the *bottling* of one and the same *Hoghead* (or other *Vessel*) of *Cider*, there may be the first part of it be too *fine*; the second part *well*; and the last not *fine* enough: and this happens when it is *broached* first above the *middle*, and then *below*; and then when it begins to run low, *tilted* or raised at the further end, and so all drawn out. But to avoid this inconvenience, I commonly set the *bottles* in the order they were filled, and so we need not open all to see the condition of the *Cider*; but trying one at each end, and one in the middle, will serve the turn: And to prevent the inconveniency, *broach* not at all above the *middle*, nor too *low*; and when you have drawn all that will run at the *Tap*, you may be secure

secure it is so far of the same *temper* with the first *bottle*. And then *tilt* the *Vessel*; but draw no more in three or four hours at the least after, and set them by themselves, that so, if you please, you may three or four days after pour them off into other *bottles*, and leave the *gross* behind: And by this means though you have a less number of *bottles* of *Cider* than you had, yet this will continue good, and neither be apt to *fly*, nor have a *sediment* in the *bottle*, which after the first *glass* is filled will render all the rest of the *bottle* thick and muddy.

By all this which I have said, I think it may be made out that those persons which I mentioned in the end of the last *Paragraph*, that sometimes had *Pepin-cider* better than ordinary, and indeed then they could make again, were beholding to *chance* for it; either that their *Apples* were not so full ripe at that as at other times, and so not bruised into so small parts; but the *fermentation* was ended in the *Vessel*, and the *Lee* being then *gross* settled before the *Cider* had *fermented* so long as to be hard.

Or else, by some *Accident* they had not put it so soon into the *Vessel*, but that in part it was settled before they put it up, and the grossest part of the *Lee* left out of the *Vessel*.

Or else, the *Bung* being left open some part of the *spirits* evaporated; and that made the *fermentation* the weaker, and to last the less time.

Or else, they put it up in such a *season* that the *weather* continued cold and frosty till the *fermentation* was quite over; and then it having wrought the less time, and with the less violence, it remained more pleasant and rich than otherwise it would have done.

Now for the time of making *Pepin-cider*, I chuse to do it in the beginning of *November*, after the *Apples* had been gathered and laid about three weeks or more in the *loft*, that so the *Apples* might have had a little time to *sweat* in the house before the *Cider* was made, but not too much; for if they be not full ripe before they be gathered, and not suffered to lye a while in the *heap*, the *Cider* will not be so pleasant; and if they be too ripe when they are gathered, or lye too long in the *heap*, it will be very difficult to separate the *Cider* from the *gross Lee* before the *fermentation* begins: and in that case it will work so long, that when it *fines* the *Cider* will be hard; for when the *Apples* are too mellow, they break into so small particles, that it will be long before the *Lee* settles by its weight only: and then the *fermentation* may begin before it be separated, and so destroy your intention of taking away the *gross Lee*. And if the *Apples* be not mellow enough, the *Cider* will not be so pleasant as it ought to be.

This being said for the time of making the *Pepin-Cider*, may (*mutatis mutandis*) serve for all other sorts of *Summer-fruit*; as the *Kentish-codling*, *Marigolds*, *Gilly-flowers*, *Summer-pear-mains*, *Summer-pepins*, *Holland-pepins*, *Golden-pepins*, and even *Winter-pear-mains*. For though they must not be made at the same time of the year, yet they must be made at the time when each respective

spective *fruit* is in the same condition that I before directed that the *Winter-pepin* should be. Nay, even in the making of that *Cider*, you are not tied to that time of the year to make your *Cider*; but as the condition of that particular year hath been, you may make your *Cider* one, two, three or four weeks later; but it will be very seldom that you shall need to begin to make *Kentish-pepin-Cider* before the beginning of *November*, even in the most southern parts of *England*.

The next thing I shall mention, is, the ordering of your *bottles* after they are filled; for in that consists no small part of causing your *Cider* to be in a just condition to *drink*: For, if it does *ferment* too much in the *bottle*, it will not be so convenient to *drink*, neither for the taste, nor wholesomeness; and if it *ferment* not at all, it will want that little *stet* which makes it *grateful* to most *Palates*. In order to this, you must observe, first, whether the *Cider* were bottled too early, or too late, or in the just time: If too early, and that it hath too much of the *flying Lee* in it, then you must keep it as cool as you can, that it may not work too much, and if so little that you doubt it will not work at all, or too little; you must by keeping it from the inconvenience of the external air, endeavour to hasten and increase the *fermentation*. And this I do, by setting it in sand to cool, and by covering the *bottles* very well with *straw*, when I would hasten or increase the *fermentation*.

And if I find the *Cider* to have been bottled in its just time, then I use neither, in ordinary weather; but content my self that it stands in a close and cool *Cellars*, either upon the ground, or upon shelves; saving in the time that I apprehend frost, I cover it with *straw*, which I take off as soon as the *weather* changeth; and consequently about the time that the cold *East winds* cease; which usually with us, is in the beginning of *April*; I set my *bottles* into sand up to the necks. And by this means I have kept *Pepin-cider* without change till *September*, and might have kept it longer, if my store had been greater: For by that time the heats were totally over, and consequently, the cause of the turn of *Cider*.

Having now declared what is (according to my opinion) to be done to preserve *Cider*, if not in its original sweetness, yet to let it lose as little as is possible; I shall now fall upon my fifth Assertion, which is, that it is probable that somewhat like the former Method may in some degree mend *Hard-Apple-cider*, *Perry*, or a drink made of the mixtures of *Apples* and *Pears*; and not impossible that somewhat of the same nature may do good to *French-wines* also.

First, for *French-wines*, I think what I have in the beginning of this discourse declared, as the hint which first put me upon the conceit, that the over-fermenting of *Cider* was the cause that it lost of its original sweetness (*viz.* the making of three sorts of *Wine*, of one sort of *Grapes*) is a testimony that the first sort of *Wine* hath but little of the *gross Lee*, and consequently, ferments but little, nor loseth but little of the original sweetness; which makes

makes it evident that the same thing will hold in *Wine*, which doth in *Cider*; but the great difficulty is (if I be rightly informed) that they use to let the *Wine* begin to ferment in the *Vat* before they put it into the *Hogheads* or other *Vessels*; and thus they do, that the *Husks* and other *Filth* (which in the way they use, must necessarily be mingled with the *Wine*) may rise in a *skum* at the top, and so be taken off: Now if they please, as soon as it is pressed, to pass the *Wine* through a *strainer*, without expecting any such purgation, and then use the same *Method* formerly prescribed for *Cider*, I do not doubt but the gross part of the *Lee* of *Wines*, being thus taken away, there will yet be enough left to give it a fermentation in the *bottles*, or second *vessel*, where it shall be left to stand, in case you have not *bottles* enough to put up all the *Wine* from which you have thus taken away the gross *Lee*.

This *Wine* I know not whether it will last so long as the other used in the ordinary way, or not; but this I confidently believe, it will not be so harsh as the same would have been if it had been used in the ordinary way; and the pleasantness of *Taste*, which is not unwholesome, is the chief thing which I prefer both in *Wine* and *Cider*.

Now for the *Hard-apple-Cider*, that it will receive an improvement by this way of ordering, hath been long my opinion; but this year an accident happened, which made it evident that I was not mistaken in this conjecture. For there was a Gentleman of *Herefordshire*, this last *Autumn*, that by accident had not provided *Cask* enough for the *Cider* he had made; and having six or seven *Hogheads* of *Cider* for which he had no *Cask*, he sent to *Worcester*, *Glocester*, and even to *Bristol*, to buy some, but all in vain; and when his servants returned, the *Cider* that wanted *Cask* had been some five days in the *Vat* uncovered; and the Gentleman being then dispatching a *Barque* for *London* with *Cider*, and having near hand a conveniency of getting *Glass-bottles*, resolved to put some of it into *bottles*; did so, and filled seven or eight *Hampers* with the clearest of this *Cider* in the *Vat*, which had then never wrought, nor been put into any other *Vessel* but the *Vat*; the *Barque* in which his *Cider* came had a tedious passage; that is, it was at least seven weeks before it came to *London*, and in that time most of his *Cider* in *Cask* had wrought so much that it was much harder than it would have been if it had according to the ordinary way lain still in the *Country*, in the place where it was first made and put up, and consequently, wrought but once.

But the other, which was in *Bottles*, and escaped the breaking, that is, by accident, had less of the *Lee* in it than other *bottles* had, or was not so hard stopped, but either before there was force enough from the fermentation to break the *bottle*, or that the *Cork* gave way a little, and so the air got out; or that the *Bottles* were not originally well corked, was excellent good, beyond any *Cider* that I had tasted out of *Herefordshire*; so that from this Experience I dare confidently say, that the using *Hard-apple-cider* after the former *Method*, prescribed for *Pepin-cider*, will make it retain

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tain a considerable part of sweetness more than it can do after the *Method* used hitherto in *Herefordshire*. Nor do I doubt but my *Method* will in a degree have the same effect in *Perry*, and the drink (as yet without a name that I do know of) which is made of the *Juice* of *Wardens*, *Pears*, and *Apples*, by several persons, in several proportions; for the *Reason* being the same, I have no cause to doubt, but the effect will follow, as well in those *Drinks*, as in *Cider* and *Wines*.

I am now come to my last Assertion; that *Cider* thus used cannot be unwholesome, but may be done to what degree any mans *Palate* desires.

First, It cannot be unwholesome, upon the same measure that stummed *Wine* is so; for that unwholesomeness is by leaving the cause of fermentation in the *Wine*, and not suffering it to produce its effect before the *Wine* be drank, and it ferments in mans body: and not only so, but sets other humours in the body into fermentation; and this prejudiceth their health that drink such *Wines*.

Now though *Cider* used in my *method* should not ferment at all, till it come into the *bottle*, and then but a little; yet the cause of fermentation being in a great degree taken away, the rest can do no considerable harm to those which drink it, being in it self but little, and having wrought in the *bottle* before men drink it; nor indeed do I think, nor ever find, that it did any inconvenience to my self, or any person that drank it when it was thus used.

Secondly, because the difference of mens palates and constitutions is very great; and that accordingly men like or dislike drink that hath more or less of the fret in it; and that the consequences in point of health are very different, in the *method* by me formerly prescribed: it is in your power to give the *Cider* just as much fret as you please, and no more; and that by several ways: for either you may bottle it sooner or later, as you please: or you may bottle it from two Taps in your *Vessel*, and that from the higher Tap will have less fret, and the lower more: or you may bottle your *Cider* all from one Tap, and open some of the bottles about a week after for a few minutes, and then stop them up again; and that which was thus stop'd will have the less fret: or, if your *Cider* be bottled all from one Tap, if you will (even without opening the bottles) you may make some difference, though not so considerable as either of the former ways, by keeping part of the bottles warmer, for the first two Months, than the rest; for that which is kept warmest will have the most fret.

Sir PAUL NEILE'S second Paper.

My Lord,

THe Paper which by the Command of the *Royal Society* I delivered in the last year, concerning the ordering of *Cider*, I have by this years experience found defective in one particular, of which I think fit by this to give you notice, which is thus: Where-as in the former Paper I mention, that after the *Pepin-Cider* hath stood 24 hours in the *Vat*, it might be drawn off into Pails, and so put into the Vessel; and that having stood a second 24 hours in that Vessel, it might be drawn into another Vessel, in which it might stand till it were fit to *Bottle*; for the particulars of all which proceeding I refer to the former Paper; and shall now only mention, That this last year we were fain to draw it off into several Vessels, not only as is there directed, *twice*, but most of our *Cider* five, and some *six* times; and not only so, but we were after all this fain to *precipitate* the *Lee* by some of those ways mention'd by Dr. *Willis* in the 7th Chap. of his Treatise *De fermentatione*. Now though this be more of trouble than the Method by me formerly mention'd; yet it doth not in the least destroy that *Hypothesis* which in the former Discourse I laid down, (*viz.*) That it was the leaving too much of the *Lee* with the *Cider*, which upon the change of air, set it into a new *fermentation*, and consequently made it lose the sweetness; for this change by the indisposition of the *Lee* to settle this year more than others, hath not hindred the goodness of the *Cider*; but that when it was at last mastered, and the *Cider* bottled in a fit temper, it was never more pleasant and quick than this year: but I find that this year our *Cider* of Summer-Apples is already turned sowre, although it be now but the first of *January*; and the last year it kept very well till the beginning of *March*; which makes me fear that our *Pepin-Cider* will not keep till this time twelvemonth, as our *Pepin-Cider* of the last year doth till this day, and still retains its original pleasantness without the least turn towards sowreness.

And I am very confident, the difference of time and trouble, which this year we found in getting the *Cider* to *fine* and be in a condition to Bottle, was only the effect of a very bad and wet Summer, which made the Fruit not ripen kindly; and to make it yet worse, we had just at the time when we made our *Cider*, this year, extream wet and windy weather, which (added to the unkindliness of the Fruit) was the whole cause of this alteration: And however my *Hypothesis* as yet remains firm, for if by taking any part of the *Lee* from the *Cider* you can preserve it in its original sweetness, it is not at all material whether it be always to be done by twice drawing off from the *Lee*, or that it must some-

times

times be done with more trouble, and by oftner repeating the same Work, so that finally it be done, and by the same means, that is, by taking away part of the *Lee*, which otherwise would have caused too much *fermentation*; and consequently have made the *Cider* lose part of its original sweetness.

My Lord, I should not have presumed to have given you and the *Society* the trouble of perusing this Paper, but that, if possible, I would have you see, that what I think an error in any opinion that I have held, I am willing to own; and yet I desire not that you should think my mistake greater than in Reality it is.

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OBSER-

OBSERVATIONS

Concerning the

Making, and Preserving

OF

CIDER:

BY

JOHN NEWBURGH Esq;

I.

IF the *Apples* are made up immediately from the *Tree*, they are observ'd to yield *more*, but not so good Cider, as when *boarded* the space of a Moneth or six weeks; and if they contract any unpleasing taste (as sometimes 'tis confess'd they do) it may be imputed to the Room they lie in, which if it hath any thing in it, of either too sweet or unfavoury smell, the *Apples* (as things most susceptible of impression) will be easily tainted thereby.

One of my acquaintance, when a child, hoarding *Apples* in a Box where *Rose-Cakes* and other sweets were their companions, found them of so unfavoury taste, and of so rank a relish deriv'd from the too near neighbourhood of the Perfumes, that even a childish palate (which seldom mislikes any thing that looks like an *Apple*) could not dispense with it.

2.

It is therefore observ'd by prudent *Fruiterers*, to lay their *Apples* upon clean new made *Reed*, till they grind them for *Cider*, or otherwise make use of them. And if, notwithstanding this caution, they contract any rottenness before they come to the *Cider-press*, the damage will not be great, if care be had before the *Apples* be ground, to pick out the finnewed and the black-rotten; the rest, though somewhat of putrefaction hath pass'd upon them, will not render the *Cider* ill condition'd, either in respect of taste, or duration.

A

Concerning Cider.

A Friend of mine having made provision of *Apples* for *Cider*, whereof so great a part were found rotten when the time of grinding them came, that they did, as 'twere wash the Room with their Juice, through which they were carried to the *Wring*, had *Cider* from them not only passable, but exceeding good; though not without previous use of the pre-mention'd Caution. I am also assured by a Neighbour of mine, That a Brother of his who is a great *Cider-Merchant* in *Devonshire*, is by frequent experience so well satisfied of the harmlessness of *Rotten-Apples*, that he makes no scruple of exchanging with any one that comes to his *Cider-press*, a Bushel of *sound-Apples* for the same measure of the other. Herein, I suppose, (if in other respects they be not prejudicial) he may be a gainer by the near compression of the tainted Fruit, which, as we speak in our Country Phrase, will go nearer together than the other. His advantage may be the greater, if the conceit which goes current with them be not a bottomless fancy, That a convenient quantity of *rotten-Apples* mixt with the sound, is greatly assitant to the work of *fermentation*, and notably helps to clarify the *Cider*.

3.

It matters not much whether the *Cider* be forced to purge it self by working downwards in the Barrel, or upwards at the usual Vent, so there be matter sufficient left on the top for a thick skin or film, which will sometimes be drawn over it when it works, after the usual manner, as when 'tis presently stop't up with space left for *fermentation*, to be perform'd altogether within the Vessel.

The thick skin, or *Leathern-coat*, the *Cider* oftentimes contracts, as well after it hath purged it self after the usual manner, as otherwise, is held the surest preservation of its *spirits*, and the best security against other inconveniences incident to *this*, and other like *vinous* Liquors, of which the *Devonshire Cider-Merchants* are so sensible, that, beside the particular care they take, that matter be not wanting for the Contexture of this upper garment by stopping up the Vessel as soon as they have fill'd it; (with the allowance of a Gallon or two upon the score of *Fermentation*) they cast in Wheaten Bran, or Dust, to thicken the Coat, and render it more certainly Air-proof. And I think you will believe their care in this kind not impertinent, if you can believe a story which I have to tell of its marvellous efficacy: A near neighbour of mine assures me, that his Wife having this year filled a Barrel with *Mead*, being strong, it wrought so boisterously in the Vessel, that the good Woman casting her eye that way, accidentally, found it leaking at every chink, which ascribing to the strength of the Liquor, she thought immediately by giving it vent, to save both the Liquor and the Vessel, but in vain; both the Stopples being pulled out, the leakage still continued, and the Vessel not at all reliev'd, till casually at length putting

putting in her finger at the top, she brake the premention'd film; which done, a good part of the *Mead* immediately flying out, left the residue in peace, and the leakage ceased. It may seem incredible that so thin a skin should be more coercive to a nutritious Liquor, than a Barrel with Oaken-Ribs, and stubborn Hoops: But I am so well assur'd of the veritableness of my Neighbours Relation, that I dare not question it: The reason of it let wiser men determine.

4.

If the *Apples* be abortive, having been (as it usually happens) shaken down before the time by a violent Wind, it is observ'd to be so indispensably necessary that they lie together in hoard, at least till the usual time of their maturity, that the *Cider* otherwise is seldom, or never found worth the drinking.

A Neighbour told me, That making a quantity of *Cider* with *Wind-falls* which he let ripen in the hoard, near a month intervening between the time of their decussion, and that which Nature intended for their maturity; his *Cider* prov'd very good, when all his Neighbours who made up their untimely fruit afloat as it fell, had a crude, austere, indigested Liquor, not worth the name of *Cider*.

5.

No Liquor is observ'd to be more easily affected with the favour of the *Vessel* it is put into, than *Cider*; therefore singular care is taken by discreet *Cider-Masters*, That the *Vessel* be not only *tasteless*, but also well prepar'd for the *Liquor* they intend to fill it with. If it be a new *Cask*, they prepare it by scalding it with Water, wherein a good quantity of *Apple-pomice* hath been boil'd: if a tainted *Cask*, they have divers ways of cleansing it. Some boil an *Ounce* of *Pepper* in so much Water as will fill an *Hogshead*, which they let stand in a *Vessel* of that capacity two or three days, and then wash it with a convenient quantity of fresh Water scalding hot, which they say is an undoubted cure for the most dangerously infected *Vessel*. A Friend and Neighbour of mine herewith cured a *Vessel* of so extream ill favour, as it was thought it would little less than poison any Liquor that was put into it. Others have a more easie, and perhaps no less effectual Remedy. They take two or three stones of quick-Lime, which in six or seven Gallons of Water they set on work in the *Hogshead* being close stopp'd, and tumbling it up and down till the commotion cease, it doth the feat. Of *Vessels* that have been formerly used, next to that which hath been already acquainted with *Cider*, a *White-Wine*, or *Vinegar Cask* is esteem'd the best; *claret* or *Sack* not so good. A Barrel newly tenanted by small *Beer* suits better with *Cider* than a strong-*Beer* *Vessel*.

6. Half

6.

Half a peck of unground Wheat put to *Cider* that is harsh and eager, will renew its *fermentation*, and render it more mild and gentle. Sometimes it happens without the use of any such means to change with the season, and becomes of *sharp* and *sour* unexpectedly *benigne* and *pleasant*. Two or three *Eggs* whole put into an *Hogshead* of *Cider* that is become sharp and near of kin to *Vinegar*, sometimes rarely lenifies and gentlizes it. One pound of *broad-figs* slit, is said to dulcifie an *Hogshead* of such *Cider*.

A Neighbour *Divine*, of my acquaintance, assured me, That coming into a *Parsonage-house* in *Devonshire*, where he found eleven *Hogsheads* of *Cider*; being unwilling to sell what he never bought, he was three years in spending that store which the former *Incumbent* had left him; and it greatly amus'd him (as well it might, if he remember'd the old Proverb, *He mends as four Ale in Summer*) to find the same *Cider*, which in *Winter* was almost as sharp as *Vinegar*, in the *Summer* become a potable and good-natur'd Liquor.

7.

A little quantity of *Mustard* will clear an *Hogshead* of muddy *Cider*. The same Virtue is ascribed to two or three rotten *Apples* put into it. *Mustard* made with *Sack*, preserves boild *Cider*, and spirits it egregiously.

8.

Cider is found to ferment much better in mild and moist, than in cold and dry weather. Every ones Experience hath taught him so much in the late frosty season. If it had not wrought before, it was in vain to expect its working or clearing then, unless by some of the artificial means premention'd, which also could not be made use of in a more inconvenient time.

9.

The latter running of the *Cider* bottled immediately from the *Wring*, is by some esteem'd a pure, clear, small, well relisht Liquor; but so much undervalued by them who desire strong drinks more than *wholesome*, that they will not suffer it to incorporate with the first running.

In *Devonshire* where their *Wring*s are so hugely great, that an *Hogshead* or two runs out commonly before the *Apples* suffer any considerable pressure, they value this before the other, much after

Concerning Cider.

after the rate which we set upon *life-honey* (that which in like sort drops freely out of the *Combs*) above that which renders not it self without *compression*. In *Jersey* they value it a *Crown* upon an *Hogshead* dearer than the other: (This I take from the Relation of one of my Neighbours, who sometimes lived in that *Island*, which for *Apples* and *Cider* is one of the most famous of all belonging to his *Majesties* Dominions) Yet even upon *this*, and their choicest *Ciders*, they commonly bestow a *pail* of *water* to every *Hogshead*, being so far (it seems) of *Pindar's* mind, that they fear not any prejudice to their most excellent *Liquors* by a dash of that most excellent *Element*: Inasmuch that it goes for a common saying amongst them, That if any *Cider* can be found in their *Island*, which can be prov'd to have no mixture of *Water*, 'tis clearly forfeited. It seems they are strongly conceited, that this addition of the most useful *Element*, doth greatly meliorate their *Cider*, both in respect of *Colour*, *Tasse*, and *Clarity*.

10.

The best *Cider-fruit* with us in this part of *Dorsetshire* (lying near *Bred-port*) next to *Pepin* and *Pearmain*, is a *Bitter-sweet*, or (as we vulgarly call them) *Bitter-scale*, of which for the first, the *Cider* unboil'd keeps well for one year; boiling it you may keep it two years or longer.

About seven years since I gave my self the Experience of *Bitter-scale Cider* both crude and boil'd. I call'd them both to account at twelve Months end. I then found the *crude Cider* seemingly as good, if not better, than the *boiled*. But, having stop'd up the *boil'd*, I took it to task again about ten Months after. At which time, I found it so excessively strong, that five persons would hardly venture upon an ordinary Glass full of it. My friends would hardly believe but I had heightned it with some of my *Chymical Spirits*. The truth is, I do not remember that I ever drunk any *Liquor*, on this side *Spirits*, so highly strong, and *spirituous*; but wanting pleasantness answerable to its strength, I was not very fond of my *Experiment*. In which I boil'd away, as I remember, more than half.

11.

A Neighbour having a good Provent of *pure-Lings* (an *Apple* of choice account with us) making up a good part of them to *Cider*, expected rare *Liquor*, but it prov'd very mean and pitiful *Cider*, as generally we find that to be, which is made without mixture. We have few *Apples* with us, beside the *Bitter-scale*, which yield good *Cider* alone; next to it

is

Concerning Cider.

is a *Deans-Apple*, and the *Pelesfantine* I think may be mention'd in the third place; neither of which need the Addition of other *Apples* to set off the Relish, as do the rest of our choicest Fruits. *Pepins*, *Pearmains*, and *Gillisflours* commixt, are said to make the best *Cider* in the world. In *Jersey* 'tis a general observation, as I hear, That the more of red any *Apple* hath in its rind, the more proper it is for this use. *Paleface's-Apples* they exclude as much as may be from their *Cider-vat*. 'Tis with us an observation, That no *sweet-Apple* that hath a tough rind, is bad for *Cider*.

12.

If you *boil* your *Cider*, special care is to be had, That you put it into the *furnace* immediately from the *Wring*; otherwise, if it be let stand in *Vats* or *Vessels* two or three days after the pressure, the best, and most *spirituous* part will ascend, and vapour away when the fire is put under it; and the longer the *boiling* continues, the less of goodness, or virtue will be left remaining in the *Cider*.

My *Distillations* sufficiently instruct me, That the same *Liquor* which (after *fermentation* hath pass'd upon it) yields a plentiful quantity of *spirit*, drawn off unfermented, yields nothing at all of *spirit*. And upon the same account it is undoubtedly certain, That *Cider* boil'd immediately from the *Wring*, hath its *spirits* compressed, and drawn into a narrower compass, which are for the most part wash'd and evaporated by late unseasonable boiling.

I

CON-

CONCERNING C I D E R,

By Doctor S M I T H.

THE best time to *grind* the Apples is immediately from the *Tree*, so soon as they are thoroughly ripe: for, so they will yield the greater quantity of *Liquor*, the *Cider* will drink the better, and last longer than if the Apples were hoarded: For *Cider* made of hoarded Apples will always retain an unpleasant taste of the Apples, especially if they contract any rottenness.

The *Cider* that is ground in a *Stone-cask* is generally accused to taste unpleasantly of the *Rinds*, *Stems*, and *Kernels* of the Apples; which it will not if ground in a *Cask* of *Wood*, which doth not bruise them so much.

So soon as the *Cider* is made, put it into the *Vessel* (leaving it about the space of one *Gallon* empty) and presently stop it up very close: This way is observed to keep it longer, and to preserve its *spirits* better than the usual way of filling the *Vessel* quite full, and keeping it open till it hath done *fermenting*.

Cider put into a new *Vessel* will often taste of the *Wood*, if it be pierced early; but the same stopped up again, and reserved till the latter end of the year, will free it self of that taste.

If the *Cider* be sharp and thick it will recover it self again: But if sharp and clear, it will not.

About *March* (or when the *Cider* begins to sparkle in the glass) before it be too fine, is the best time to bottle it.

Cider will be much longer in clearing in a mild and moist, then in a cold and dry *Winter*.

To every *Hogshead* of *Cider*, designed for two years keeping, it is requisite to add (about *March*, the first year) a quart of *Wheat* unground.

The best *Fruit* (with us in *Glocestershire*) for the first years *Cider*, are the *Red-strake*; the *White* and *Red Must-apple*, the *sweet* and *four Pepin*, and the *Harvey-apple*.

Pearmains alone make but a small liquor, and hardly clearing of it self; but, mixed either with *sweet* or *sour Pepins*, it becomes very brisk and clear.

Must-apple-cider (though the first made) is always the last ripe; by reason that most of the *pulp* of the *Apple* passeth the *strainer* in pressing, and makes it exceeding thick.

The *Cider* of the *Bromsbury-Crab*, and *Fox-whelp*, is not fit for drinking, till the *second* year, but then very good.

The *Cider* of the *Bromsbury-Crab* yields a far greater proportion of *spirits*, in the distillation, than any of the others.

Crabs and *Pears* mixed make a very pleasing *Liquor*, and much sooner ripe than *Pears* alone.

O F

OF C I D E R.

By Capt. SYLAS TAYLOR.

Herefordshire affords several sorts of *Cider-apples*, as the two sorts of *Red-strakes*, the *Gennet-moyle*, the *Summer-violet*, or *Fillet*, and the *Winter-fillet*; with many other sorts which are used only to make *Cider*. Of which some use each sort *simply*; and others *mix* many sorts together. This *County* is very well stored with other sorts of Apples; as *Pepins*, *Pearmains*, &c. of which there is much *Cider* made, but not to be compared to the *Cider* drawn from the *Cider-apples*; among which the *Red-strakes* bear the Bell; a *Fruit* in it self scarce edible; yet the *juice* being pressed out is immediately pleasant in taste, without any thing of that *refringency* which it had when incorporated with the *meat*, or *flesh* of the *Apple*. It is many times *three Months* before it comes to its clearness, and *six Months* before it comes to a ripeness fit for *drinking*; yet I have tasted of it *three years* old, very pleasant, though dangerously strong. The colour of it, when *fine*, is of a sparkling *yellow*, like *Canary*, of a good full body, and *oily*: The *taste*, like the *Flavour* or *perfume* of excellent *Peaches*, very grateful to the *Palate* and *Stomach*.

Gennet-moyles make a *Cider* of a smaller body than the former, yet very pleasant, and will last a year. It is a good eating pleasant sharp fruit, when ripe, and the best *Tart-apple* (as the *Red-strake* also) before its ripeness. The *Tree* grows with certain knotty *extuberancies* upon the *branches* and *boughs*; below which *knot* we cut off boughs the thickness of a mans *wrist*, and place the knot in the ground, which makes the *root*; and this is done to raise this fruit; but very rarely by *grafting*.

Of *Fillets* of both sorts (*viz.* *Summer* and *Winter*) I have made *Cider* of that proportionate taste and strength, that I have deceived several experienced *Palates*, with whom (simply) it hath passed for *White-Wine*; and *dashing* it with *Red-Wine*, it hath passed for *Claret*; and mingled with the *Syrup* of *Raspberries* it makes an excellent *womans wine*: The fruit is not so good as the *Gennet-moyle* to eat: The *Winter-fillet* makes a *lasting Cider*, and the

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Summer

Summer-fillet an *early Cider*, but both very strong; and the *Apples* mixt together make a good *Cider*.

These *Apples* yield a *liquor* more grateful to my *Palate* (and so esteem'd of in *Herefordshire* by the greater *Ciderists*) than any made of *Pepins* and *Pearmains*, of which sorts we have very good in that *Country*; and those also both *Summer* and *Winter* of both sorts, and of which I have drank the *Cider*; but prefer the other.

Grounds separated only with a *Hedge* and *Ditch*, by reason of the difference of *Soils* have given a great alteration to the *Cider*, notwithstanding the *Trees* have been grafted with equal care, the same *Grafts*, and lastly, the same care taken in the making of the *Cider*. This as to the *Red-strake*; I have not observ'd the same *niceness* in any other fruit; for *Gennet-moyles*, and *Filletts* thrive very well over all *Herefordshire*. The *Red-strake* delights most in a fat soil: *Hamlacy* is a rich intermixt soil of *Red-fat-clay* and *sand*; and *Kings-capel* a low hot sandy ground, both well defended from noxious *Winds*, and both very famous for the *Red-strake-cider*.

There is a *Pear* in *Hereford* and *Worcester-shires*, which is called *Bareland-pear*, which makes a very good *Cider*. I call it *Cider* (and not *Perry*) because it hath all the *properties* of *Cider*. I have drank of it from half a year old to two years old. It keeps it self without *Roping* (to which *Perry* is generally inclined) and from its taste: *Dr. Beal*, in his little *Treatise* called the *Herefordshire-Orchard*, calls it deservedly a *Masculine Drink*; because in taste not like the sweet *luscious feminine* juice of *Pears*. This *Tree* thrives very well in barren ground, and is a fruit (with the *Red-strake*) of which *Swine* will not eat; therefore fittest to be planted in *Hedge-rows*.

Red-strakes and other *Cider-apples* when ripe (which you may know partly by the blackness of the *Kernels*, and partly by the colour and smell of the fruit) ought to be gathered in *Baskets* or *Bags*, preserved from bruising, and laid up in heaps in the *Orchard* to sweat; covered every night from the dew: Or else, in a *Barn-floor* (or the like) with some *Wheat* or *Rye-straw* under them, being kept so long till you find, by their *mellowing*, they are fit for the *Mill*.

They that grind, or bruise their *Apples* presently upon their gathering, receive so much *liquor* from them, that between *twenty* or *twenty two Bushels* will make a *Hogshead* of *Cider*: but this *Cider* will neither keep so well, nor drink with such a *fragrancy* as is desired and endeavoured.

They that keep them a *month* or *six weeks* hoarded, allow about *thirty bushels* to the making of a *Hogshead*; but this hath also an inconvenience; in that the *Cider* becomes not *fine*, or fit for drinking, so conveniently as a *mean* betwixt these two will afford.

Keep them then about a *fort-night* in a *board*, and order them to be of such a *cast* by this *mellowing*, that about *twenty*

ty five *Bushels* may make a *Hogshead*, after which *mellowing* proceed thus.

1. Pick and clear your *Apples* from their *stalks*, *leaves*, *moaziness*, or any thing that tends toward *rottenness* or decay.
2. Lay them before the *stone* in the *Cider-Mill*, or else beat them small with *Beaters* (such as *Paviers* use to fix their pitching) in deep *troughs* of *Wood* or *Stone*, till they are fit for the *Press*.
3. Having laid clean *wheat straw* in the bottom of your *Press*, lay a heap of bruised *Apples* upon it, and so with small handfuls or *mists* of *straw*, which by twisting takes along with it the ends of the *straw* laid first in the bottom, proceed with the bruised *Apples*, and follow the heaps with your twisted *straw*, till it comes to the height of two foot, or two foot and a half; and so with some *straw* drawn in by *twisting*, and turned over the top of it (so that the bruised *Apples* are set as it were into a deep *Cheef-vat* of *straw*, from which the *Country* people call it their *Cider-Cheefe*) let the *board* fall upon it *even* and *flat*, and so engage the force of your *skew* or *Press* so long as any *Liquor* will run from it. Instead of this *Cheefe* others use *bags* of *Hair-cloth*.
4. Take this *Liquor* thus forced by the *Press*, and strain it through a *strainer* of *hair* into a *Vat*, from whence straight (or that day) in *pails* carry it to the *Cellar*, running it up presently in such *Vessels* as you intend to preserve it in; for I cannot approve of a long *evaporation* of *spirits*, and then a disturbance after it settles.
5. Let your *Vessels* be very tight and clean wherein you put your *Cider* to settle: The best form is the *Stund* or *stand*, which is set upon the lesser end, from the top tapering downwards; as suppose the *head* to be *thirty* inches *diameter*, let then the *bottom* be but *eighteen* or *twenty* inches in *diameter*; let the *Tun-hole* or *Bung-hole* be on the one side *outwards*, towards the *top*. The reason of the goodness of this form of *Vessel* is, because *Cider* (as all strong *Liquors*) after *fermentation* and working, contracts a *cream* or *skin* on the top of them, which in this form of *Vessel* is as it sinks contracted, and fortified by that contraction, and will draw fresh to the last drop; whereas in our ordinary *Vessels*, when drawn out about the half or middle, this *skin dilates* and *breaks*, and without a quick draught decays and dies.
6. Reserve a *Pottle* or *Gallon* of the *Liquor* to fill up the *Vessel* to the brim of the *Bung-hole*, as oft as the *fermentation* and working lessens the *Liquor*, till it hath done its work.
7. When it hath completed its work, and that the *Vessel* is filled up to the *bung-hole*, stop it up close with well mix'd *clay*, and well tempered, with a handful of *Bay-salt* laid upon the top of the *clay*, to keep it moist, and renewed as oft as need shall require; for if the *clay* grows dry it gives vent to the *spirits* of the *Liquor*, by which it suffers decay.

I am against either the *boylng* of *Cider*, or the hanging of a bag of *Spices* in it, or the use of *Ginger* in drinking it; by which things people labour to correct that *windiness* which they fancy to be in it: I think *Cider* not *windy*; those that use to drink it are most free from *windiness*; perhaps the *virtue* of it is such, as that once ripened and mellowed, the drinking of it in such strength combats with that *wind* which lies insensibly latent in the body. The *Cider* made and sold here in *London* in *Bottles* may have that *windiness* with it as *Bottle-beer* hath, because they were never suffered to *ferment*: But those that have remarked the strength and vigour of its *fermentation*, what weighty things it will cast up from the bottom to the top, and with how many bubbles and bladders of *wind* it doth *work*, will believe that it clears it self by that operation of all such injurious *qualities*.

To preserve *Cider* in *Bottles* I recommend unto you my own *Experience*, which is, Not to *bottle* it up before *fermentation*; for that incorporates the *windy quality*, which otherwise would be ejected by that operation: This violent suppression of fermentation makes it *windy* in drinking, (though I confess *brisk* to the *taste*, and *sprightly* cutting to the *Palate*;) But after *fermentation*, the *Cider* resting two, three, or four Months, draw it, and *bottle* it up, and so lay it in a *Repository* of cool *springing water*, two or three foot, or more, deep; this keeps the *spirits*, and the best of the *spirits* of it together: This makes it drink quick and lively; it comes into the *glass* not *pale* or troubled, but bright *yellow*, with a speedy vanishing *nittiness*, (as the *Vintners* call it) which *evaporates* with a *sparkling* and *whizzing* noise; And than this I never tasted either *Wine* or *Cider* that pleased better: Inasmuch that a *Noble-man* tasting of a *Bottle* out of the *water* (himself a great *Ciderist*) protested the excellency of it, and made with much greater charges, at his own dwelling, a *water Repository* for his *Cider*, with good success.

An

An ACCOUNT of

Perry and Cider

Out of GLOUCESTER-SHIRE,

Imparted by

DANIEL COLLWALL Esq;

A Bout *Taynton*, Five Miles beyond *Glocester*, is a mixt sort of *Land*, partly *Clay*, a *Marle*, and *Crafb*, as they call it there, on all which sorts of *land*, there is much *Fruit* growing, both for the *Table* and for *Cider*: But it is *Pears* it most abounds in, of which the best sort, is that they name the *Squash-Pear*, which makes the best *Perry* in those Parts. These *Trees* grow to be very large, and exceeding fruitful, bearing a fair round *Pear*, red on the one side, and yellow on the other, when fully ripe: It oftentimes falls from the *Tree*, which commonly breaks it; but it is of a nature so *harsh*, that the *Hogs* will hardly eat them.

They usually plant the *stocks* first, and when of competent bigness (and tall enough to prevent *Cattel*) *graft* upon them: 'Tis observed, that where *land* is *Plow'd* and dress'd for *Corn*, the *Trees* thrive much better than in the *Pasture-grounds*, so as divers *Orchards* are yearly *plow'd* and sown with *Corn*, which for the most part, they suffer their *Swine* to eat upon the ground, without cutting; and such *Plantations* seldom or never fail of plentiful *Crops*, especially in the *Rye-land*, or light *Grounds*.

About *Michaelmas* is made the best *Cider*, and that of such *Fruit* as drops from the *Trees*, being perfectly mature; and if any are gathered sooner, they let them lye in the *house* 8 or 9 days for the better mellowing.

The best *Mills* to grind in, are those of *Stone*, which resembles a *Mill stone* set *edge-ways*, moved round the *Trough* by an *Horfe* till the *Fruit* be bruised small enough for the *Press*: This done, then put it up into a *Crib* made with strong *studds*, and *Oken* or *Hazel* twigs about 3 foot high, and 2¹/₂ wide, which is placed on a *Stone* or *Wooden Cheese* fat, a foot broader than the *Crib*, fitted to a round *Trough* for the *Liquor* to pass into the *Cistern* which is a large *Vessel*: When the *Crib* is filled with the *foresaid ground Fruit*, they put a *Stone* upon it, but first they fit a *Circle* of fresh *straw* about the *Crib*, to preserve the *Must* (which is the bruised *Fruit*) from straining through the *Crib* when they apply the *Skews*, which being two in number, and of a good size, turn in a great *beam*, and so are wrung down upon the

the *Crib*, within which they place two wide and thick *Cheese-fass*, and several *blocks* upon the *Fruit*, to crush it down with the more force, by which means it is wrung so *dry*, as nothing can be had more out of it. A *Crib* will contain at *once*, as much ground *Fruit*, as will make above an *Hogs-head* of *Cider*, and there may be dispatched *six* or *seven* such *Vessels* in one day.

When the *Pressing* is finished, they take out the *Fruit*, and put it into a great *Fat*, pouring several *Pails* of *Water* to it, which being well *impregn'd*, is ground again slightly in the *Mill*, to make an ordinary *Cider* for the *servants*; this they usually drink all the *Year* about.

When the best *Liquor* is tun'd up, they commonly leave the *Bung-hole* open, for *nine* or *ten* days, to *ferment* and *purify*; for though in most places they add *straining* to all this, yet some of the *Husks* and *Ordure* will remain in it. The *Vessel* after a day or two standing, is fill'd up, and still as the *Cider* waxes in working, they supplie it again, till no more *silt* rises; and then *stop* it up very accurately close, leaving only a small *breathing* hole to give it air for a *Moneth* after, and to prevent the *bursting* of the *Vessel*.

Note, That they sometimes put; *Pears*, and; of *Apples*.

The usual Names of Gloucester-shire Cider-Fruit.

Red-breaks, growing chiefly in the *Rye-Lands*, sweet *White-Muſt*, *Red-Muſt*, the *Winter-Muſt*, the *Streak-Muſt*, the *Gennet-Moyl*, the *Woodcock-Apple*, the *Bromsgrove-Crab*, the *Great-white-Crab*, the *Heming*, and divers other sorts, but these are the principal.

The *Pears* for *Perry* are,

The *Red Squash-pear* esteem'd the best, the *John-pear*, the *Harpary Green-pear*, the *Drake-pear*, the *Green Squash-pear*, the *Mary-pear*, the *Lullam-pear*: these are the chief.

Another

Another Account of CIDER from a Person of great Experience.

Cider-Apples for strength, and a long lasting *Drink*, is best made of the *Fox-Whelp* of the *Forest of Deane*, but which comes not to be drunk till two or three years old.

2. *Bromsborrow-Crab* the second year; In the Coast and Traſt 'twixt Hereford and Ledbury.

3. *Under-leaf*, best at two years, a very plentiful bearer hath a *Rhenish-wine* flavour; the very best of all *Ciders* of this kind, boarded a little within doors. The longer you would keep, the longer you must board your *Fruit*.

4. The *Red-strake* of *Kings-Capel*, and those parts, is in great variety: Some make *Cider* that is not of continuance, yet pleasant and good; others, that lasts long, inclining towards the *Bromsborrow-Crab* rather than a *Red-strake*.

5. A long pale *Apple*, called the *Coleing*, about *Ludlow*, an extraordinary bearer.

6. The *Arier-Apple*, a constant bearer, making a strong and lasting *Cider*; some call them *Richards*, some *Grang-apples*; and indeed they make so excellent a *Drink*, that they are worthy to be record'd into use.

7. The *Olive*, well known about *Ludlow*, may, I conceive be accounted of the *Winter-Cider Apples*, of which 'tis the constant report, that an *Hogs-head* of the *Fruit* will yield an *Hogs-head* of *Cider*.

The *Summer-Ciders* are,
1. The *Gennet-Moyl* of one year: The best *Baking-Apple* that grows, and keeps long baked; but not so unbaked without growing mealy: it dries well in the *Oven*, and with little trouble. The *Gennet-Moyl Cider*, when the *Fruit* is well boarded and mellow, will body, and keep better.

2. The *Summer Red-strake*, of a wonderful fragrant and Aromaticque quality.

3. Sir Ed. Harley's little *Apple*, esteemed to make one of the richest *Ciders* in the World. Also, his,

4. Great *Summer-Apple*, resembling the *Red-strake*, juicy and Aromaticque.

5. The *White-Muſt*, streaked *Muſt*, &c. great bearers, and their *Cider* early ripe.

6. *Pearmains*, have made excellent *Cider*; as good, if not superior to any other in some years; and though it be true, that every sort of *Fruit* makes better *Drink* some years than others; yet, for the most part, the goodness and perfection of *Cider* results from the lucky, or intelligent *Gathering*, or *Hoarding* of the *Fruit*, or from both; and this knowledge must be from *Experience*.

7. Generally, the *Cider* longest in *fining*, is strongest and best lasting, especially if the *fruit* have been well boarded for some time.

8. *Cider* made of *Green*, and immature *Fruit*, will not *fine* kindly, and when it does, it abides not long good, but suddenly becomes *eagre*.

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9. *Cider*

9. *Cider* kept in very cool *Cellars*, if made of ripe *Fruit*, renders it long in *fining*, and sometimes *Cider* by expoling abroad in the *Sun*, and kept *Warm*, hath sooner *matur'd*, and continu'd long good : But the best *Drink* is that which *finer* of it self, preserv'd in an indifferent temper.

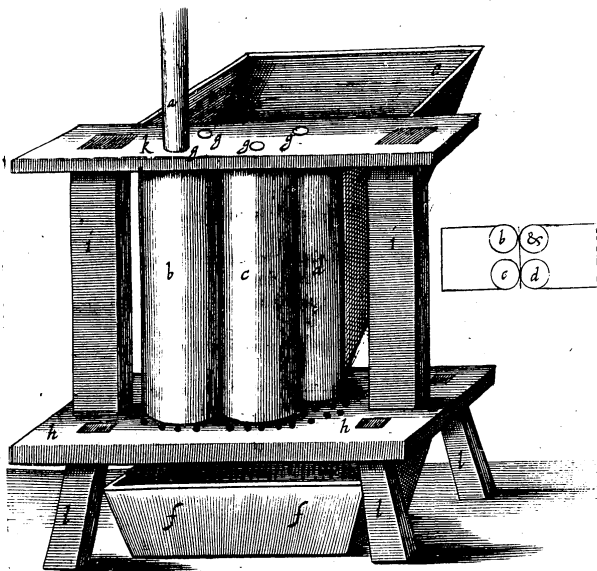
10. All *Cider* suffers *Fermentation* when *Trees* are *blossoming*, though it be never so old ; and *Cider* of very ripe *Fruit*, it *bottl'd* in that *season*, will acquire a *fragrancy* of the *Blossom*.

11. New *Cider*, and all *diluted* and *warred Ciders*, are great *Enemies* to the *Teeth*, and cause violent *pains* in them, and *Rheums* in the *Head*.

12. One *Rotten-Apple*, of the *same kind* with the *sound*, corrupts a whole *Vessel*, and makes it *Musty*. But,

To Conclude this Treatise,

We will gratifie the *Cider-Master* with the *Construction* of a new kind of *Press* brought into the *R. Society*, by their *Curator*, the ingenious *Mr. Hooke*, and, if perfectly understood by him that shall imitate it, recommended not only for its extraordinary *Dispatch*, but for many other *vertues* of it, chiefly, the accurately *grinding* of the *Pulp*, and keeping the *Husks* from descending with the *Liquor*.



Explication

Explication of the Figures.

- a The *Axis*, by which *four Cylinders* are to be mov'd, either by the force of *Men, Horses, Wind, or Water, &c.*
- b, c, d Three of the 4 (visible) *Cylinders*, so placed, that those which are first to *bruise* the *Apples*, may stand at about *half an Inch*, or less *distance* from each other : Those that are to *press* out the *juice* may join as *close*, as they can well be made to move.
- f, f The *Trough*, in which to receive the *Liquor*, running through certain *holes* made in the lower *Plate* there marked.
- e, e The *Hopper*, made *tapering* towards the *bottom*, in which you fling the *Apples*, and supply them as they *sink* towards the *Cylinders*. Note, That such another *Hopper* is suppos'd to be also made, and fitted to this *fore-part* of the *Press*, but here omitted, that the *prospect* and *description* of the *Cylinders* may the better be laid open and *demonstrated*.
- g, g, g The *Spindles* of each *Cylinder*.
- b, b, i, i, k, k The *Frame*, consisting of two *Plates*, and two *Pilasters*, which hold the *Cylinders* together. Note, That the *Cylinders* must be made of excellent *Oaken Timber*, or other *hard Wood* ; the *dimensions* about 3 foot long, one foot and half *diameter* : The rest of the *Frame* for *thickness, &c.* of *size* and *strength* proportionable.
- L, L The *Legs* which support the *Frame*.
- F I G. II.
- Represents the *Ichnography* of the *First*.

FINIS.